PROMOTING EMPLOYEE ENGAGEMENT THROUGH MANAGERS' STRATEGIC USE OF MEETINGS

by

Joseph Andrew Allen

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Approved by:

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Dr. Steven Rogelberg

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Dr. S. Douglas Pugh

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Dr. Cliff W. Scott

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Dr. Tammy Beck

ABSTRACT

JOSEPH ANDREW ALLEN. Promoting employee engagement through managers' strategic use of meetings. (Under the direction of DR. STEVEN ROGELBERG)

Employee engagement is a positive, fulfilling, work-related state of mind that researchers suggest is characterized by vigor, dedication, and absorption in work activities. Employee engagement is heavily marketed by HR consultants and recently received increased interest among academics. In work meetings, managers in organizations may have the opportunity to inspire and engage their employees. Specifically, the study's aim was to test and further substantiate the efficacy of Kahn's theory of psychological engagement by providing a look at an organizational context where employee engagement is developed, the meeting. The findings provide tentative support that the psychological conditions for engagement mediate the relationship between managers' strategic use of meetings (e.g. encouragement of participation in decision making, freedom of speech, justice/fairness, etc.) and overall employee engagement. The practical and theoretical significance of these findings are discussed.

ACKNOWLEDGMENTS

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DEDICATION

To Karen, Rachel, and Alice. Hopefully someday you will read this, appreciate its content, and understand where daddy was when you were very little. You inspire me to be better than I was and better than I am.

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CHAPTER 1: INTRODUCTION

Employee engagement is heavily marketed by HR consultants and recently received increased interest among academics (e.g. Macey & Schneider, 2008). Research supports this interest, illustrating that an engaged workforce is a performance oriented workforce (Salanova, Agut, & Peiro, 2005). Furthermore, others found that organizations with higher employee engagement have a higher return on investment and return on assets than organizations with lower employee engagement (Macey, Schneider, Barbera, & Young, 2009). These apparent gains in organizational performance may help explain the fervor with which HR managers and organizational leaders pursue the development of an engaged workforce. Although research suggests that both a supportive supervisor and a supportive organization are important to developing an engaged workforce (Saks, 2006), few have attempted to locate the context and the particular behaviors that may encourage the full engagement of employees in their work. The purpose of this study is to discuss one such context, the work meeting, and test whether selected managerial behaviors in that setting may help them create an engaged workforce.

In work meetings, managers in organizations may have the opportunity to inspire and engage their employees. There are more than 11 million meetings each day in the United States alone (MCI Inc., 1998) and in larger organizations (more than 500 employees) managers spend 75% of their time on meeting related activities (van Vree, 1999). In these larger organizations, meetings may be the primary location where employees and managers come together. Through a discussion of engagement theory and how managers use meetings, this study proposes and tests a model suggesting that managers can promote employee engagement through their work meetings by providing opportunities where employees may develop the psychological conditions for engagement (see Figure 1). Specifically, the study's aim is to test and further substantiate the efficacy of Kahn's (1990) theory of psychological engagement by providing a look at an organizational context where employee engagement is developed.

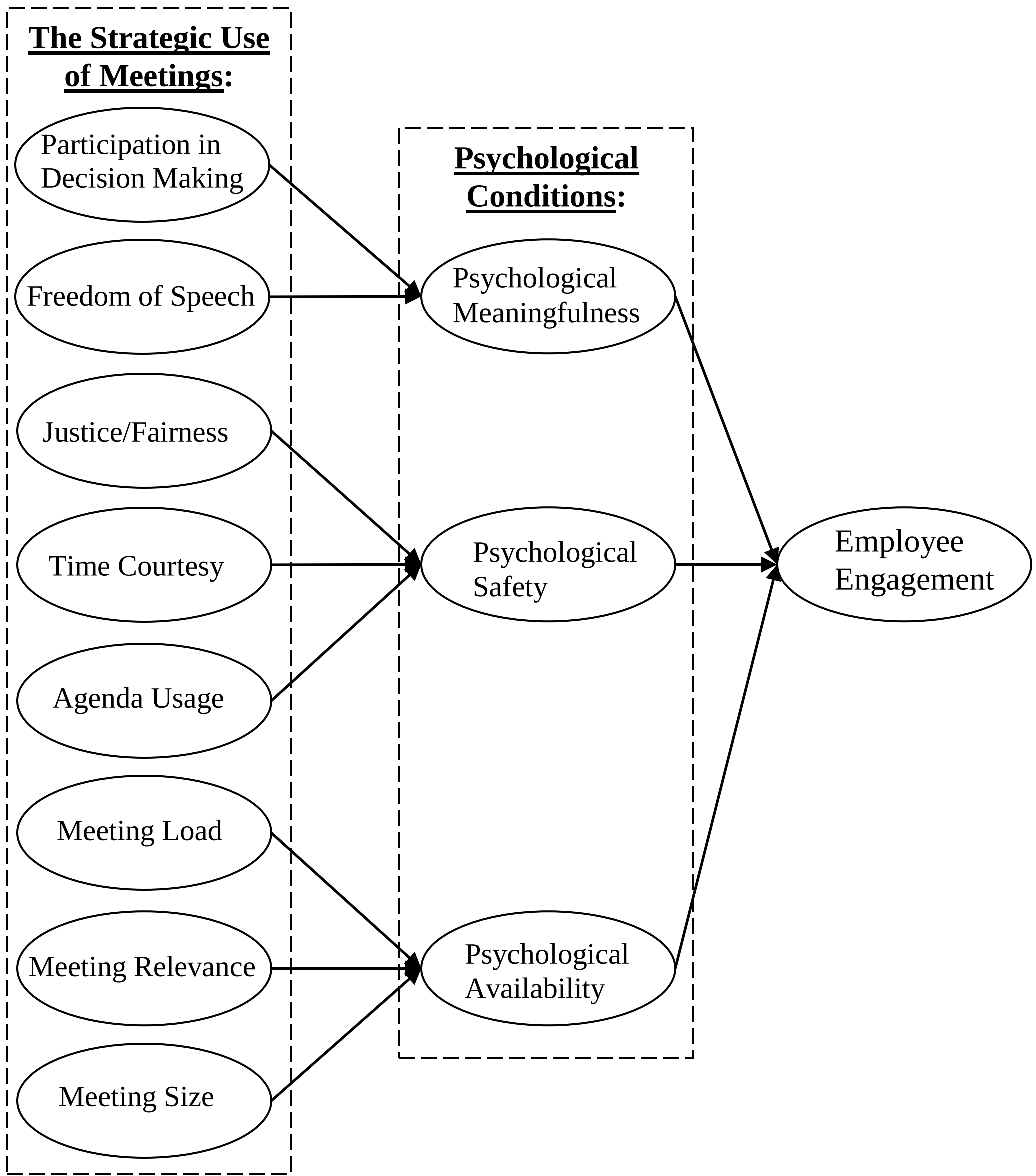

Figure 1: Employee Engagement and Managers' Strategic Use of Meetings Model

CHAPTER 2: LITERATURE REVIEW

Employee Engagement

Although conceptually the relationship between work meetings and an engaged workforce may appear self-evident to some, the theoretical reasons for why these two phenomena are connected stems from theories of employee engagement. Employee engagement has received much attention by organizational researchers in recent years (Macey & Schneider, 2008), however, the construct itself was first postulated by Kahn (1990). Kahn's focus was on the psychological components of engagement and what is needed for an individual to be able to engage. According to Kahn (1990), developing this work-related state of mind is accomplished through encouraging employees to incorporate their whole-selves in their work. His theory of psychological engagement suggests that employees must find meaning in their work (psychological meaningfulness), believe that it is safe to fully engage themselves in the work (psychological safety), and obtain the adequate resources needed to fully engage (psychological availability) (Kahn, 1990).

According to Kahn (1990), psychological meaningfulness refers to an employees' feeling that they are valued, worthwhile, and feel able to give of themselves within their workplace environment. An employee must feel that if they fully engage in their work, then the work environment (i.e. managers and peers) will reciprocate their efforts in the form of positive interpersonal interactions, provision of additional resources, and other important work benefits. Psychological safety refers to employees having a sense of being able to employ their whole self without experiencing any negative consequences to self-image, status, or their career (Kahn, 1990; May,Gilson, & Harter, 2004). An employee who feels psychologically safe will attempt to incorporate aspects of their life outside of their work role (e.g. other work experiences, hobbies, etc.) into their job in an appropriate fashion (e.g. organizational citizenship behaviors) (Macey & Schneider, 2008). Psychological availability refers to employees' sense of "possessing the physical, emotional, and psychological resources necessary for investing self-in-role performances" (Kahn, 1990, p. 705). Employees who are psychologically available feel that they are capable of driving the physical, intellectual, and emotional efforts necessary to perform their work. Kahn (1990) and others (e.g. May et al., 2004) assert that it is through the development of these psychological conditions that employees become able to engage in their work and perform at a higher level.

Engagement and Burnout

As the concept of psychological engagement developed over the past 20 years, other researchers attempted to connect the engagement construct to other psychological experiences at work. Specifically, researchers were intrigued by the possibility that engagement, or at least certain facets of engagement (e.g. vigor and dedication), could represent opposite psychological experiences to burnout (Gonzalez-Roma, Schaufeli, Bakker, & Llorets, 2006). This group of researchers defined employee engagement as a "positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002, p. 70; Bakker & Schaufeli, 2008). Vigor refers to high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties (Salanova, Agut, & Peiro, 2005). Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge at work. Absorption consists of being fully concentrated, happy, and deeply engrossed in one's work whereby time passes quickly, and one has difficulty detaching oneself from work.

In contrast to focusing on self-in-role performance, these researchers were more interested in how the psychological experience of engagement related to important organizational outcomes as well as the conceptual opposite, burnout (Gonzalez-Roma et al., 2006). Using a series of three different samples and non-parametric Mokken scaling, Gonzalez-Roma et al. (2006) concluded that the components of burnout (exhaustion and cynicism) and engagement (vigor and dedication) are indeed opposites along distinct bipolar dimensions. Notice that this conceptualization excludes the absorption component of engagement (Macey & Schneider, 2008). Even given this limitation, this body of research provides preliminary indications of the antecedents and drivers of engagement by connecting this rather new construct to one that has a long history in the organizational sciences.

Engagement and Job Demands – Resources Model

Another group of researchers focused on the job demands – resources model as it pertains to employee engagement and performance (e.g. Xanthopoulou, Baker, Heuven, Demerouti, & Schaufeli, 2008). From this perspective, employees appear more likely to engage in their work when they have adequate resources to offset the demanding nature of their job tasks. For example, one study found that job resources (e.g. supervisor support, innovativeness, appreciation, and organizational climate) moderated the relationship between particular job demands and work engagement such that job resources provided a buffering of the negative effect of increase work demands (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007). Although not specifically part of Bakker et al.'s (2007) conclusions, this conceptualization of the buffering effects of job-related resources illustrates the importance of psychological availability as discussed by Kahn (1990).

Building off these findings, Xanthopoulou and colleagues conducted two diary studies that are particularly meaningful to the present study. In the first study, they focused on how fluctuations in job resources (e.g. autonomy, coaching, and team climate) from day-to-day are related to employee personal resources such as engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Using a sample of employees in a fast-food company, they found that day-level coaching had a direct positive relationship with day-level work engagement. Moreover, when the supervisor took time to discuss work-related matters with their employees, the employees had higher levels of engagement that day.

In the second diary study, Bakker and Xanthopoulou (2009) went a step further to see if work engagement levels of one employee crosses over to another employee. They hypothesized that work engagement has a contagion effect similar to emotions (see Barger & Grandey, 2006 for a discussion of emotional contagion). Using a sample of dyads, Bakker and Xanthopoulou confirmed this crossover effect, but the finding only held on days when the dyads interacted more frequently with one another. When daily communication frequency was high, the crossover effect between the employees was more pronounced. Further, they found that when an employee's work engagement level is frequently communicated, it has an indirect relationship on their coworker's performance through the coworker's work engagement. Taken together, these two studies illustrate the importance of communication from the supervisor (i.e. coaching) and between coworkers (i.e. crossover effect) in the development of employee engagement. Not surprisingly, a setting that provides for both supervisor and coworker interaction is work meetings, the focus of this study.

Engagement and Job Performance

Until recently, most research focused on antecedents to engagement and assumed that engagement is an important predictor of performance and other valuable organizational outcomes (Rich, LePine, & Crawford, 2010). Rich et al. (2010) verified this assumption by showing that employee engagement is related to job performance beyond various traditional predictors (e.g. job satisfaction and job involvement). Specifically, using a sample of firefighters and their supervisors, they assessed several antecedents to engagement (e.g. perceived organizational support) and showed that engagement mediates the relationship between these predictors and performance. The firefighters provided assessments of their perceived organizational support, value congruence, core self-evaluations, engagement, and other control factors. The supervisors provided independent assessments of each firefighter's task performance and organizational citizenship behaviors. Rich et al. (2010) found that job engagement mediated the relationship between perceived organizational support, value congruence, and core self-evaluations and overall job performance (i.e. task performance and organizational citizenship behaviors). These findings lend support to both researchers' and practitioners' interest in employee engagement as a potential source of competitive advantage for organizations.

In sum, employee engagement appears to be driven by incorporating the whole self into the workplace role (Kahn, 1990), the opposite of psychological burnout (Gonzalez-Roma et al., 2006), and developed by the provision of organizational resources (Xanthopoulou et al., 2009). These three frameworks provide a substantial base of knowledge concerning employee engagement in organizations, but seem to function distinct and separate from one another. Although researchers continue to acknowledge Kahn as the original author of the engagement construct, few attempt to incorporate his conception of psychological engagement into the more mainstream employee engagement research dialogue. What's missing from these frameworks is an attempt to reconcile these differences by meaningfully incorporating the conditions that drive psychological engagement (e.g. meaningfulness, safety, and availability) into models of employee engagement (e.g. vigor, absorption, and dedication). Additionally, these studies fail to identify a particular context where managers can influence employee engagement and potentially benefit from the increased performance of their employees (Rich, LePine, & Crawford, 2010).

Integrating Engagement Frameworks

The current study attempts to begin to fill these gaps in the literature by incorporating the psychological conditions of engagement into overall employee engagement. Additionally, this study explores a workplace context, the meeting, where manages can develop an engaged workforce. Although there does not appear to be any study that truly integrates these frameworks of engagement, one study attempted to study

Kahn's psychological conditions (i.e. psychological meaningfulness, safety, and availability) for engagement (May et al., 2004). May and colleagues assessed the psychological conditions for engagement along with several proposed antecedents such as job involvement, work-role fit, and supervisor relations. They found that all three psychological conditions exhibited significant positive relations with psychological engagement. Additionally they found that meaningfulness showed the strongest relation to psychological engagement and that many of the job resources and environmental features assessed (e.g. job enrichment, work-role fit, supportive coworkers/supervisor, etc.) were mediated by the psychological conditions. This study confirmed previous research concerning various potential antecedents to engagement (Tyler & Blader, 2003), and extended previous research substantially by providing the first real test of the intervening psychological components in the development of an engaged workforce.

Although this study illustrated the potential for integrating these frameworks, other researchers are quick to identify problems with the engagement construct, theory, and current conceptualizations (Macey & Schneider, 2008). A recent review of employee engagement literature provides a discussion of some of the issues that researchers face when attempting to assess employee engagement (Macey & Schneider, 2008). The most salient concern is that many researchers assert that engagement may actually be "old wine in new bottles". That is, some researchers suggest that employee engagement may simply be a higher order construct made up of components of job satisfaction, commitment, etc. (Newman & Harrison, 2008). Thus, researchers often face the critique that their research simply reflects a repackaging of ideas already discussed and supported previously (Macey & Schneider, 2008).

Although this is potentially a major concern, Macey and Schneider provided a series of propositions concerning state engagement that attempted to illustrate how engagement may differ from these concepts. One of these propositions focused on Kahn's (1990) conceptualization of engagement with reference to self-in-role performance and identity. This proposition states that "state engagement additionally refers to the investment of the self in the person's work and the perceived importance of work outcomes and organization membership to that person's identity" (Macey & Schneider, 2008, p. 13). Kahn and others argue that in order for self-in-role performance to occur, the psychological conditions of engagement must first be developed. In discussing the importance of psychological conditions in the development of personal engagement, Kahn stated,

> "My premise was that people employ and express or withdraw and defend their preferred selves on the basis of their psychological experiences of self-in-role…there are critical psychological states that influence people's internal work motivations. Here, the focus was on psychological conditions – the momentary rather than static circumstances of people's experiences that shape behaviors…if certain conditions are met to some acceptable degree, people can personally engage in moments of task behaviors" (p. 703).

Thus, Kahn believed and illustrated that in order for an individual to personally engage in their work, they must first develop certain psychological conditions. In order for employees to engage, they too must experience these psychological conditions.

In terms of this study, it is believed that the development of the psychological conditions for engagement is necessary before an engaged state can be achieved by employees. Many studies assess antecedents to engagement (e.g. Saks, 2006; Salanova, Agut, & Peiro, 2005; Sonnentag, 2003, etc.), but relatively few (perhaps only one) also assess the degree to which these antecedents develop these psychological conditions. Many studies make a theoretical and conceptual leap directly from job characteristics and work environment to behavioral engagement (i.e. VAD model) without also considering the psychological changes that are needed for an individual to engage (e.g. Saks, 2006). This study begins to address this theoretical/conceptual gap by testing a model of engagement that incorporates the psychological conditions for engagement between the context and the behavior (see Figure 1).

The Meeting Context

Meetings may be a key location where managers provide opportunities for employees to engage in their work. Theories of employee engagement suggest that it is through employees' interactions with other agents of the organization that they begin to develop a desire to engage and to learn what it takes to engage in the organization (Bakker & Schaufeli, 2008). The meeting is one of the most common activities in modern organizations where employees and their supervisors frequently interact (Schwartzman, 1986; 1989; Rogelberg, Leach, Warr, & Burnfield, 2006). People meet to discuss problems, solve problems, share information, brainstorm, discuss strategic orientations, define their mission/goals, and build unity. Within organizations, meetings are often defined as three or more individuals coming together to discuss a matter (Schwartzman, 1989; Rogelberg et al., 2006). These meetings range in formality from a desk-side chat to a boardroom meeting with agendas, charts, and other support materials. Subject matter in these meetings varies from broad organizational functioning to individual tasks within the organization. However, in most meetings there is interaction among agents of the organization where resources change hands, decisions are made, job tasks are assigned, and workload is distributed. These organizational functions are likely to impact the psychological states of those in attendance.

There are many reasons why the meeting is an appropriate context for studying the psychological conditions for engagement and overall employee engagement. First, some researchers argue that meetings are what constitute and reconstitute the organization (Schwartzman, 1989; Tracy & Dimock, 2003) and therefore organizational functioning and subsequent employee performance is a matter of how meetings are functioning. Tracy and Dimock (2003) assert that most of the sense of community felt by organizational members may be built inside the meeting process where ideas are proposed, implemented, or discarded. Ballard and Gomez (2006) see meetings as locations for organizational memory where the vision and focus of the organization is defined and redefined. These and other research findings illustrate a general belief that meetings may be the central phenomenon in the organizing process. Therefore, if activities necessary for organizational success occur in meetings, then it is likely the psychological conditions for engagement are affected by employees' experiences in meetings.

Building off meetings as a location for organizational functioning, a second reason for studying meetings and employee engagement stems from how meetings often provide the location where strategic changes are discussed, decisions are made, and goal-directed behavior is implemented (Jarzabkowski & Seidle, 2008). In terms of employee job performance, the meeting is how much needed coordination occurs which eliminates waste due to misinformation. Individuals have the opportunity to present ideas and see the responses to those ideas which may include the provision of resources to support the idea. Many jobs require coordination and are dependent upon others for resources within the organization. In terms of engagement, these resources must be provided in order for employees to be psychologically available to engage (see Kahn, 1990) as well as perform their work tasks.

Third, member attitudes concerning the overall organization and their specific job are developed and changed in meetings (McComas, 2003; Rogelberg et al., 2006). Rogelberg, Allen, Shanock, Scott, and Shuffler (2010) illustrate the importance of meetings by suggesting that employees' satisfaction with their work meetings is a contemporary facet of job satisfaction. Using affective events theory, they assert that meetings are powerful affect-generating events in organizations that meaningfully contribute to overall job satisfaction. To test this hypothesis, they conducted two surveys asking working adults concerning their attitudes toward meetings, the organization, and a host of other theoretically meaningful drivers of overall job satisfaction. Across these two samples, meeting satisfaction positively and significantly predicted job satisfaction above and beyond individual difference variables (e.g. demographics and negative affect), traditional facets of job satisfaction (e.g. work, supervision, coworker, promotion, and pay satisfaction), and other conceptually and theoretically relevant variables (e.g. communication satisfaction, team-member satisfaction, affective organizational commitment, etc.). They conclude that "it appears as if meeting satisfaction is both a statistically and practically meaningful predictor of overall job satisfaction…the data do suggest that meetings are salient organizational events for understanding job satisfaction"

(p. 164). This study clearly indicates that meetings are important events in organizations that certainly impact employee well-being and attitudes for better or worse.

Additionally, research concerning facilitators in meetings shows that attitudes developed in meetings carryover to organizational behavior to the degree that the meeting leader represents the organization (Schwarz, 1994; Neiderman & Volkema, 1999). Meetings are a location where leaders of the organization display their concern for employees as well as assert the task oriented behaviors necessary for continued productivity. Research on supervisor run meetings illustrate how these social situations in organizations develop important attitudes that lead to productive workplace behaviors (Baran & Shanock, 2010). Baran and Shanock (2010) investigated how supervisors' actions in meetings they lead relate to employee' behaviors in such meetings and their overall perceptions of their supervisor and the organization. They found that leader-member exchange fully mediated relationships between good meeting practices and meeting citizenship behaviors. Leader-member exchange partially mediated the relationship between good meeting practices and perceived organizational support. These findings suggest that the way managers' use meetings matters in terms of the development of good supervisor-employee relationships as well as encouraging desirable employee attitudes and behaviors.

Fourth, in a recent review of meetings literature (Scott, Rogelberg, & Allen 2010), Scott and colleagues discussed the importance of work meetings as both collaboration technology and interventions in organizations. The idea that meetings are a technology for the coordination of work activity is among the most common and recognizable ways to conceptualize them (Van Vree, 1999). Meetings are often called when work coordination becomes too cumbersome to manage without synchronous group interaction through media-rich modalities such as face-to-face communication (Trevino, Lengel, & Daft, 1987). Viewing meetings in this way suggests that meetings are a tool organization members may use in their efforts to coordinate group work processes and decision making in a deliberate and relatively systematic manner. If employees see managers using meetings in this sort of deliberate fashion, they may find these interactions more productive, rewarding, and engaging.

Similarly, viewing meetings as an intervention mechanism or tool within organizations suggests that meetings can be used strategically in organizations for problem solving, information sharing, and promote organizational change (Tracy & Dimock, 2003; Weick, 2001). For example, managers may actually use the meeting as sites in which organizational change processes could be managed, coordinated and assessed. This function of such meetings could be envisioned to bring about a systemic change in culture (e.g. engaged workforce), a change in safety procedures that redefines organizational reporting and hierarchy, or train employees on a new process that overtly changes their approach to organizational operations. The growing body of research that conceptualizes meetings as interventions (e.g. McComas & Scherer, 1998; McComas, 2001; Ellis, Mendel, & Nir, 2006), suggests that meetings such as after-action reviews, individualized educational plan meetings, systems of care meetings, and critical incidents stress debriefings have important effects on meeting attendees. For example, recent research on after-action reviews – retrospective meetings about normal operations in organizations – suggests that they actually enhance safety in organizations by improving understanding of what it means to be safe and assists in the development of safety oriented group norms (Allen, Baran, & Scott, 2010). If particular types of meetings are used to develop specific climates in organizations, it stands to reason that meetings impact the psychological states of attendees and their work behaviors.

Taken together these attributes of meetings in organizations make it a prime location where managers may develop an engaged workforce. It is believed that meetings are a location where managers can provide the appropriate experiences that should promote the psychological meaningfulness, safety, and availability necessary for employees to engage their whole selves in their work. However, the question remains as to what types of manager behaviors in meetings might help engage employees?

CHAPTER 3: HYPOTHESES

Managers' Strategic Use of Meetings and Psychological Conditions for Engagement

Managers that lead meetings typically control both the purpose for and processes in meetings (Miranda & Bostrom, 1999). Managers have the opportunity to use the meetings for many different reasons (e.g. solve staffing problems) and in many different ways (e.g. reach decision by consensus or majority rules) (Panko & Kinney, 1995; Tracy & Dimock, 2003). They also control various process factors in meetings including turn-taking, decision making format, and degree of attendee participation (Nixon & Littlepage, 1992; Neiderman & Volkema, 1999; Bluedorn, Turban, & Love, 1999). Thus, the strategic use of meetings refers to how managers use meetings to maximize outcomes for meetings participants (i.e. feelings of engagement) and the organization (i.e. employee performance). This is accomplished through implementing quality processes in meetings and the purposeful use of meetings. Given the control afforded managers concerning the purpose and process of meetings, it is believed that managers can use meetings strategically to develop the psychological conditions for engagement as described by Kahn (1990, 1992) and others (May et al., 2004).

Psychological Meaningfulness

Employees experience psychological meaningfulness at work when they "feel worthwhile, valued, valuable; feel able to give to and receive from work and others in course of work" (Kahn, 1990, p. 705). Employees who feel needed by the manager and the organization are more likely to give of themselves in the process of their work. Social exchange theory (Cropanzano & Mitchell, 2005; Saks, 2006) suggests that when individuals give of themselves, they expect a level of reciprocity on the part of the receiver, in this case the manager and organization. When employees are given the opportunity to think about how to best carry-out their job (i.e. participation in decision making) and can choose to communicate their ideas openly (i.e. freedom of speech), they may experience more of this psychological condition and therefore engage their whole self in their work.

In meetings, one method managers' can use to promote psychological meaningfulness is by encouraging employees to participate in making decisions relevant to their jobs. *Participation in decision making* in meetings refers to the extent to which managers encourage meeting attendees to assist in the decision making process (e.g. providing information, ideas, alternative solutions, etc.) (Cotton, Vollrath, Froggatt, Lengnick-Hall, & Jennings, 1988; Allen & Judd, 2007). Participation in decision making provides a concrete mechanism (i.e. participation) for connecting the meeting to employee engagement and performance (Seibold & Shea, 2001; Allen & Judd, 2007). Participation continues to be a focus of interventions designed to enhance employee involvement as well as engagement (Stogdill, 1950; Townsend & Gebhardt, 2007). In meetings, managers encourage increased levels of participation in decision making by establishing meeting ground rules (e.g. process for turn-taking), opening the floor up for comments and questions about decision topics, and building in time during the meeting for individuals to seek and provide feedback on current and past decisions.

Participative decision making theory and research suggests that managers who encourage and require participation have employees who are more satisfied with their work and reciprocate with higher performance on work tasks (Black & Gregersen, 1997; Seibold & Shea, 2001; Kim, 2002). Research shows that high performing employees are more likely to participate and be involved in meetings (Sonnentag, 2001), individuals often seek and do not get the level of participation they desire (Allen & Judd, 2007), and a participating and involved workforce is a performance oriented workforce (Saks, 2006). However, participation in decision making research shows that programmatic participation initiatives often fail (Stohl & Cheney, 2001) which suggests that a more narrow focus may be the next step (Seibold & Shea, 2001). The meeting is a workplace location where participation can be promoted. However, reviews of participation in decision making make no reference to initiatives focusing on this narrow domain in organizations (Seibold & Shea, 2001; Dachler & Wilpert, 1978).

When managers' encourage participation in meetings, they may promote psychological meaningfulness among their employees because the employees begin to feel valued as their input on decisions is openly shared, discussed, and implemented. This increased sense of worth and value will likely be reciprocated thus encouraging engagement behaviors generally (Kahn, 1990). Therefore, the following is proposed:

Hypothesis 1a: Managers' promotion of participation in decision making among employees in meetings is positively related to psychological meaningfulness.

In addition, managers promote the development of psychological meaningfulness for their employees' by providing them freedom of speech/voice in meetings. In contrast to participative decision making which focuses on the decision process, *freedom of* *speech/voice* in meetings refers to the degree to which managers' encourage employees to speak up in meetings and provide them with adequate time to have a voice in the meeting setting (Gordon & Infante, 1980; Appelbaum, Hebert, & Leroux, 1999). Instead of simply asking for feedback on particular decisions relevant to each employee's job (i.e. participation in decision making), managers promote the free flow of ideas and opinions more generally about all topics discussed during the meeting. Employees who feel they have freedom of speech in meetings are likely to be willing to bring up issues, concerns, or problems they are facing rather than simply responding to decision points presented by the manager.

Previous research illustrates the importance of voice in general. Folger's (1977) classic experiments looking at voice in resource allocation (i.e. pay distribution) clearly illustrate the importance of simply stating one's opinion even when that opinion is not the accepted outcome. In these studies, individuals were assigned to a "voice" condition and a "mute" condition. Those in the "voice" were allowed to express their opinion concerning the pay they receive (fair vs. unfair) for their work task. Those in the "mute" condition were required to keep quiet and not express their opinion. Those in the "voice" condition were more satisfied than those in the "mute" condition regardless of the equity or inequity with regards to pay. Thus, the simple act of stating one's opinion seemed to affect overall satisfaction with the fairness and nature of the task.

When managers apply the findings of these experiments in meetings, they may be able to capitalize on the benefits of simply providing voice for their employees. For example, managers can provide time in meetings for employees to express job-related concerns as well as adequate time to propose ideas for solving their concerns. Managers can also provide moments within the meeting to answer clarifying questions, ask employees to restate the issues discussed in their own words, and ask for feedback from each employee directly. Also, the simple act of providing time for dissenting views, ideas, or opinions in meetings helps to build a culture of openness and empowers employees to take ownership of their work (Haskins, 1996). Further, empowerment research suggests that providing freedom of speech/voice among employees may lead to greater feelings of autonomy among employees as well as increased overall satisfaction (Appelbaum et al., 1999). Feeling a sense of ownership and identifying with the organization are both shown to promote feelings of engagement and are likely to develop the psychological conditions for engagement among employees (Macey et al., 2009). Thus, it is proposed:

Hypothesis 1b: Managers' encouragement of freedom of speech/voice in meetings is positively related to psychological meaningfulness.

Psychological Safety

According to Kahn (1990), psychological safety is defined as "feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career" (p. 708). Employees feel psychologically safe when they believe they will not experience adverse consequences for expressing their true selves at work. Managers help employees experience psychological safety by promoting a safe environment where the boundaries surrounding acceptable behaviors are clear and predictable (May et al., 2004). The meeting is one context where managers can establish a safe environment where involvement is clearly defined, rules are predictable, and outcomes/resources are fairly distributed. Managers' equitable treatment of employees in meetings (justice/fairness) as well as the appropriate way in which they execute meetings from a time and organizational perspective may provide employees a workplace environment that promotes psychological safety and subsequent engagement behaviors.

Justice and fairness in meetings refers to the equity with which meeting processes are applied and the degree to which the meeting leader values equality in meeting interactions (Tyler & Blader, 2003; Folger, 1977; Folger, Rosenfield, Grove, & Corkran, 1979). For example, managers can ensure that meeting minutes are taken accurately and shared openly, that a decision making process is followed, and that duties in the meeting are rotated around so everyone gets a turn doing the most desired activity (e.g. "devil's advocate"). More specifically, managers can promote justice/fairness in meetings by ensuring that multiple-viewpoints concerning meeting topics are readily expressed and no single meeting attendee dominates. That is, managers can promote the equitable distribution of face-time within the meeting setting by keeping out-spoken meeting attendees in check.

Additionally, research indicates that procedural and interactional justice (e.g. fairness in meetings) as communicated by managers is an important factor in the development of individuals' social identity (Blader & Tyler, 2009). Social identity theory suggests that individuals develop a sense of self that is relative to their interactions, involvement, and connections to their social environment (e.g. workplace) (Cheney, 1983; Pratt, 2000). Managers can help employees develop a strong social identity relative to the organization by utilizing their meetings with employees to build equality in their working relationships. More importantly, research suggests that when employees perceive that procedures and interactions with their supervisor are fair and just, they are more likely to engage in workplace activities (Saks, 2006). Thus, managers can use the meeting setting to inspire greater psychological safety and employee engagement simply by being more fair and showing greater concern for their employees' well-being. Therefore, the following hypothesis is proposed:

Hypothesis 2a: Managers' justice/fairness in meetings is positively related to psychological safety.

In addition, managers and employees may develop a form of psychological contract relative to their interactions in meetings. According to Rousseau (1989), a psychological contract is "an individual's beliefs regarding the terms and conditions of a reciprocal exchange agreement between that person and another party" (p. 122). For meetings, such a contract relates to the terms and conditions under which the manager and the employees agree to meet and discuss work related issues. Although this contract may be unspoken and informal, evidence of such a contract in relation to meetings between a manager and their employees is apparent in the way the manager appropriates meeting time and the degree to which they use an agenda. That is, employees develop expectations concerning the way meetings with their manager are executed from both a time and agenda coverage perspective. If these expectations are violated, employees may feel less safe within their work environment (Burgoon & Hale, 1988; Weick, 2001).

One aspect of the psychological contract developed between manager and employee includes the implicit time contract in relation to meetings (Perlow, 1998). The managerial role provides an opportunity for managers to show concern and consideration of their employees' time constraints. Time researchers suggest that managers are in a position to affect the balance between work time and family time (Perlow, 1998).

Managers develop an implicit meeting time contract (i.e. time courtesy behaviors) with their employees by starting meetings on time, ending when scheduled to end, and scheduling meetings with adequate time for employees to arrange their other activities for the day. Previous research suggests that these courteous meeting behaviors encourage the development of a positive employee-supervisor relationship (Baran & Shanock, 2010). Thus, by simply being courteous in the execution of the meeting, managers may further motivate employees to engage in their work. Thus, the following is hypothesized:

Hypothesis 2b: Managers' meeting time courtesy behaviors is positively related to psychological safety.

Managers can also promote employees' psychological safety by structuring meeting activities effectively through the use of an agenda, thus establishing a positive psychological contract. Although a seemingly simple task, agenda usage is a good design characteristic predictor of meeting quality (Cohen, Rogelberg, Allen, & Luong, 2010). The agenda serves as a means to control the information shared, the topics covered, and the overall flow of the meeting (Tropman, 1996). However, it is not enough to simply have an agenda during the meeting. According to Cohen et al. (2010), the agenda is most effective when it is shared prior to the meeting and individuals are given the opportunity to add to or subtract from the items on the agenda. For example, when employees see the agenda prior to the meeting, they are given an opportunity to think about their potential contribution to the meeting, whether that be in the form of a formal proposal or simply a comment that assists in the decision making process. When implemented properly and consistently, agenda usage provides for the psychological safety of employees in the meeting setting and in the organization generally which should assist in subsequent engagement behaviors. Thus, the following hypothesis is proposed:

Hypothesis 2c: Managers' agenda usage is positively related to psychological safety

Psychological Availability

As previously mentioned, psychological availability refers to an individual's belief that they have the emotional, cognitive, and physical resources necessary to engage at work (Kahn, 1990; May et al., 2004). These resources are often developed in settings, such as meetings, where information is shared, learning opportunities are provided, and tangible resources are allocated (Macey et al., 2009). The communicative nature of meetings as well as their interactive nature makes them an ideal location for work relevant information sharing and learning (Ballard & Gomez, 2006). Thus, employees may develop greater psychological availability when they meet with managers (meeting load), when the meetings are relevant (meeting relevance), and when the size of the meeting is appropriate (meeting size).

First, in order for employees to be psychologically available, they need to meet with their supervisor relatively frequently, but not excessively (Rogelberg et al., 2006). Following the job demands-resources model previously discussed (Bakker et al., 2007), meetings may provide a location where managers allocate both physical and psychological resources to employees. In meetings, physical resources needed to accomplish work tasks are allocated and psychological resources (e.g. support) are obtained through the coaching environment established by the manager (Xanthopoulou et al., 2009). Thus, meetings must occur in order for appropriate coordination of resources to occur and subsequent engagement to be possible.

However, excessive meeting load may lead to other issues that could negatively impact engagement generally. Luong and Rogelberg (2005) took an interruptions framework to the study of meetings in organizations suggesting that meetings are daily hassles that potentially take employees away from more meaningful workplace activities. They found that as meeting load increases overall feelings of fatigue and workload increases (Luong & Rogelberg, 2005). When employees have excessive amounts of meetings or have meetings at times when they would prefer to accomplish other work tasks, the meeting itself may take a toll on their overall productivity and perhaps their desire to engage in their work generally. Thus, although employees need meetings to be able to feel psychological available to engage, excessive meeting load may actually result in this relationship becoming negative.

> *Hypothesis 3a*: Meeting load will be related to psychological availability such that the relationship will be positive at lower levels of meeting load and become negative at higher levels of meeting load (i.e. curvilinear, concave upward).

Second, when supervisor-led meetings are relevant to employees' work, the meetings may provide feelings of psychological availability by helping employees understand how to engage (i.e. cognitive and physical resources) as well as where their engagement efforts should be focused. Although it is shown that simply having a purpose (i.e. an agenda) may increase meeting quality (Cohen et al., 2010; Leach, Rogelberg, Warr, & Burnfield, 2009), it is believed that meetings that are more relevant to the employees' goals more aptly provide the resources needed to for employees to engage.

One explanation for this proposed relationship could be how managers can provide a goal-oriented (e.g. Porter, 2005) approach to each meeting they call. Goal theory suggests that one way to increase worker motivation is by connecting work processes and projects to overt goals of the organization as well as personal goals of the employee (Klein, Wesson, Hollenbeck, & Alge, 1999). When meetings help employees accomplish the organizations' and their own personal goals, they will find those meetings more relevant and perhaps more psychologically fulfilling. For example, Reinig (2002) assessed a goal attainment model of meeting satisfaction asserting that when goals are attained and there is a perception that future goals will be accomplished in meetings, meeting satisfaction increases generally. A meeting goal is "any need or want that an individual makes a conscious effort to fulfill" within the meeting context (Reinig, 2002, p. 2). Further, managers can communicate the link between employee work goals and the goals of the organization by connecting the meeting purposes to the larger institutional goals. Thus, if the organizations' goal is to reduce product costs and increase sales volume, then meetings with employees about accomplishing that goal should be more motivating for employees and help them engage more fully in their work than other less relevant meetings. Therefore, the following are hypothesized:

Hypothesis 3b: Meeting relevance is positively related to psychological availability.

Third, meeting size may be an important factor in developing feelings of psychological availability among employees. Psychological availability depends largely upon the adequacy of cognitive, emotional, and physical resources (Kahn, 1990). Resources within organizations and, by extension within a given meeting, are typically finite in nature (Barney, 1991; Priem & Butler, 2001). There are only so many staplers (i.e. physical resources) and only so much time a manager can devote to supporting employees (i.e. psychological resources). Thus, as meeting size increases, the distribution of resources across the participants is likely to be diluted. Even though a manager may distribute organizational resources in a fair manner, they may not be able to successfully distribute psychological resources (e.g. attention, support, etc.) as fairly in larger meetings. Given time constraints and other situational constraints (e.g. room size), some meeting attendees may be overlooked, not have opportunities to participate, and simply feel outside the core meeting group. Thus, when meetings become large, the resources needed to psychologically engage employees becomes diluted and subsequent engagement behaviors are reduced generally. Thus, the following is hypothesized:

Hypothesis 3c: Typical meeting size is negatively related to psychological availability.

Psychological Conditions and Employee Engagement

The foregoing discussion and hypotheses suggests that how managers use meetings should assist in the development of the psychological conditions for engagement. However, the relationship between the psychological conditions for engagement and overall employee engagement has received relatively little attention by researchers. Although there is much research on potential antecedents to engagement (e.g. Cartwright & Holmes, 2006; Bakker & Schaufeli, 2008, etc.), only one study tested some of these antecedents in relation to developing first the psychological conditions for engagement and then subsequent engagement in a mediation framework (May et al., 2004). In this study, May et al. (2004) focused on how the psychological conditions relate to overall psychological engagement at work (i.e. emotional, cognitive, and physical components of engagement). This study extends this finding by attempting to relate these conditions to more globally assessed employee engagement that includes the aspects of vigor, dedication, and absorption. As previously discussed, by illustrating a relationship between the psychological conditions and overall employee engagement in this manner, this study connects Kahn's original psychological engagement theory to the body of literature focused more on the engagement/burnout dimensional constructs and the resource development nature of engagement.

Furthermore, according to Kahn (1990), psychological meaningfulness, safety, and availability define "the experiential conditions whose presence influenced people to personally engage and whose absence influenced them to personally disengage". In other words, these psychological conditions are necessary for engagement to occur and without them, individuals may choose not to incorporate their selves in their work. From a managerial perspective, choosing not to engage robs the organization of a valuable resource that is readily available if properly developed and encouraged (Macey et al., 2009). Thus, the following are proposed:

Hypothesis 4a: Psychological meaningfulness is positively related to employee engagement.

Hypothesis 4b: Psychological Safety is positively related to employee engagement.

Hypothesis 4c: Psychological Availability is positively related to employee engagement.

Mediating Effects of Psychological Conditions

Finally, this study explores the research question of whether the three psychological conditions actually explain the effects of managers' strategic use of meetings on employees' engagement at work. Research on employee engagement in general has neglected to examine these psychological conditions (e.g. Saks, 2006) even though they may actually intervene between many of the current studied antecedents of engagement and the actual initiation of engagement related behavior. This research addresses this void in the literature by testing whether these psychological processes explain the influence of managers' use of meetings on employee engagement. Thus, the following mediation hypothesis is furthered.

Hypothesis 5: Psychological meaningfulness, safety, and availability will mediate the relationship between managers' strategic use of meetings (e.g. participation in meetings, freedom of speech, justice/fairness, meeting relevance, etc.) and overall employee engagement at work.

CHAPTER 4: METHODS

Participants

Participants for this study were working adults who have work-related meetings on a regular basis with their supervisor. A pre-notification email was sent to potential participants (*n* = 11,552) from the UNCC Alumni Association and the UNCC MBA Program (see Appendix C). A total of 587 individuals completed the first survey, which was a response rate of 5.1%. The email list used to gather responses had a considerable number of non-deliverable email addresses. Additionally, it is not possible to verify how frequently these emails are checked by potential respondents. Therefore, this is a conservative estimate of the response rate. The email list administrators indicated that approximately 50% of the emails are not checked frequently. Thus, a less conservative response rate using this adjustment suggests approximately a 10% overall response rate.

To have complete data, participants had to complete a second survey at a later time containing the dependent measure. Of those individuals, 63.2% (*n* = 370) completed the second survey. Following recommendations from current SEM researchers (Schumacker & Lomax, 2004), respondents with more than 5% of their data missing or who had more than 2 items missing from the focal scales were dropped (*n* = 51). Thus the final usable sample included 319 respondents. Item-mean substitution was used to replace all missing values before proceeding with data analysis. The sample was 52.7% female with an average age of 43 years. The average tenure with their current work organization was 9.5 years and 3.7 years with their current supervisor. Ninety-seven percent were college grads and worked more than 20 hours per week. About half the sample indicated they supervise others (49%). The sample also represented a variety of organizational types: 32% publicly traded firms, 19% privately held firms, 16% non-profit firms, and 33% public sector (e.g. government).

Since these response rates are lower than desired, several steps were taken to check for nonresponse bias following current guidelines from research methodologists (Rogelberg & Stanton, 2007). First, a wave analysis was conducted comparing those who responded to the first survey in time to receive the second survey invitation (i.e. one-week time lag) and those who responded to the first survey after the second survey invitation was sent (i.e. did not receive second survey invitation). This is a comparison of early respondents to late respondents to the initial survey. Results indicate that the means and standard deviations on the focal variables were nearly identical providing evidence that nonresponse bias did not affect the results. Second, an interest-level analysis was conducted comparing those who indicated they wanted to receive a summary of the results to those who did not indicate an interest in seeing a results summary. It was assumed that those who said they wanted a summary of the results were more interested in the topic and may be more motivated to take the survey. If interest level is related to participants' standing on the topics that make up the survey (e.g. if interested individuals have more meetings), the survey results may be susceptible to bias (Rogelberg & Stanton, 2007). Results indicate that the means and standard deviations on the focal variables were nearly identical across these groups providing further evidence that nonresponse bias was not present in this data. Third, demographic comparisons were used to determine if the sample adequately represented the population from which it was drawn. Results indicate that the sample demographic parameters (e.g. education, gender, and age) are nearly identical to the overall population, suggesting a representative sample was obtained and further mitigating potential concerns relating to nonresponse bias. Fourth, also following recommendations by Rogelberg & Stanton (2007), split-group mean comparison analyses were used to verify that those who completed both surveys did not differ substantially from those who completed only the first survey (and received the second survey invitation) on the focal predictor variables. The analyses showed no significant mean differences.

Procedure

Before testing the forgoing hypotheses, several of the measures were pilot tested (e.g. meeting relevance, psychological conditions for engagement, etc.). Some of these measures were adapted from related measures and designed for this study, thus pilot testing was an important first step to verify that the measures operate as expected (Guion, 1998). Pilot testing was primarily used to help support content validity and test measurement quality. First, several representative potential participants took the survey in the presence of the investigators. During this process, they vocalized any concerns about items contained on the survey as well as formatting of the survey generally. Second, a small group of individuals (n = 5) took the survey and then called the primary investigator to discuss their experience with the survey. After making modifications based on their recommendations and following recommendations within survey literature (e.g. Guion, 1998), a final representative sample was collected (N = 305) to pilot the measures. Psychometric analysis of these data (e.g. Cronbach's alpha, exploratory factor analysis, item-analysis, etc.) provided insights into which items/scales were functioning as desired leading to a few final changes. The final set of items used for the current study are contained in Appendices A and B.

After pilot testing the measures, two surveys were administered in an effort to test the forgoing hypotheses. The surveys were administered using an online survey tool (i.e. surveymonkey). After sending the pre-notification email, an email invitation was sent which included the link to the first survey (see Appendix C). The first survey was administered to the sample of working adults and assessed all the focal variables (e.g. managers' use of meetings variables, psychological conditions for engagement, employee engagement, etc.). A final invitation email was sent to participants who completed the first survey inviting them to complete the second survey (see Appendix C). This second survey assessed the focal outcome variable (i.e. employee engagement). Each survey opened with a cover letter containing additional detail concerning participation and rights of participants as requested by the IRB (see Appendix C).

Cross-sectional studies where the main predictor and criterion variables are assessed at the same time point on the same instrument are susceptible to common-method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The relationships between variables measured in this fashion can be inflated due to the correlation between method and error variances associated with the data gathering process. Through the development and administration of the surveys, several steps were taken to mitigate the potential effects of this bias (for a full account of these procedures see Podsakoff et al., 2003). Podsakoff et al. (2003) provide five general procedural "remedies" for dealing with this bias (p. 887). First, it is recommended that the measures of the predictor and criterion variables be obtained from different sources. Given the nature of the study, this particular recommendation was not incorporated. That is, the research questions focused on employees' perceptions of managers' behaviors in relation to meetings (predictor) and how that affects their level of engagement (criterion). The best source for the employees' perceptions of these behaviors and attitudes are the employees themselves. However, each of the remaining recommendations was incorporated.

Second, it is recommended that researchers incorporate temporal, proximal, psychological, or methodological separation of measurement (Podsakoff et al., 2003). The goal here is to obtain the measurement of the predictor and criterion separately in some way. By administering the second survey containing the criterion variable after a brief time-lag, this study incorporated this important methodological recommendation. However, Podsakoff et al. (2003) also acknowledged that introducing the time-lag also may introduce error resulting from events that occur during the time-lag. Additionally, research suggests that recent events may affect state engagement (Sonnentag, 2003) and others have voiced concerns about using a time-lag design for engagement research focused on the state-of-mind aspects of engagement (Macey & Schneider, 2008). For this reason, engagement was included on the first survey and the second survey. The time-lag between assessments was as brief as possible given methodological constraints (i.e. approximately one week). The proposed model was tested using the time-lag value of engagement thus helping mitigate concerns about common-method bias.

Third, common-method bias is also mitigated by protecting respondent anonymity and reducing evaluation apprehension (Podsakoff et al., 2003). Researchers often desire to match data across levels of individuals within organizations or collect data across time and must match time points. This matching process removes the assumption of anonymity by requiring some identifier be collected. Since all participants in this study were contacted via personal email, their anonymity to the researcher was not expected, but their anonymity to other participants and employers was guaranteed by ethical guidelines and Internal Review Board provisions. In addition, response apprehension was reduced by assuring respondents that there are “no right or wrong answers” and that they should answer the questions as honestly as possible (Podsakoff et al., 2003).

Fourth, another procedural remedy for common-method bias is counterbalancing question order on the survey instrument (Podsakoff et al., 2003). By rearranging the order of the criterion and predictor measures on the survey, researchers are able to control for item-context-induced mood states, priming effects, and other biases related to question context or item location on the survey. For this study, five different versions of the first survey were created. Each survey had a different ordering of variables/scales for participants to assess. The achieved goal was to have approximately the same number of participants complete each version of the survey in order to counterbalance method effects across the five versions. The second survey only contained two scales, only one of which is part of the current study, thus only one version of this survey was created.

Fifth, Podsakoff et al. (2003) provide two additional recommendations for mitigating common-method bias focusing on improving the scale items used in the research itself. The key is to construct the best items possible and avoid issues with construction that could lead to participant confusion. According to Tourangeau, Rips, and Rasinski (2000), researchers can avoid problems with item comprehension by doing the following:

> "(a) define ambiguous or unfamiliar terms; (b) avoid vague concepts and provide examples when such concepts must be used; (c) keep questions simple, specific, and concise; (d) avoid double-barreled questions; (e) decompose questions related to more than one possibility into simpler, more focused questions; and (f) avoid complicated syntax" (Podsakoff et al., 2003, p. 888).

Each of these steps were addressed through the pilot testing process (e.g. SME evaluation of the scales and pilot sampling). Additionally, it is recommended that the predictor and criterion measures use different scale endpoints and formats. For this study, the predictors, mediators, and criterion were assessed using different scale endpoints and formats. For example, several measures for the strategic use of meetings were assessed using 5-point rating scales from 1 being "never" to 5 being "always" whereas the psychological conditions for engagement used a different 5-point scale ranging from 1 being "strongly disagree" to 5 being "strongly agree". Additionally, several predictors are count variables rather than scales, thus assisting in providing variation in the method of assessment of the constructs. Also, these scaling differences stem from how these measures were previously used and no modification to those formats was needed to accomplish this recommendation.

Measures

Appendices A and B provide all the items contained on the two surveys. The surveys contained measures of managers' use of meetings (i.e. participation in decision making, freedom of speech, meeting load, meeting size, etc.), psychological conditions of engagement, employee engagement, and various demographic and control variables. As previously mentioned, the email invitations and directions for participation (i.e. cover letter) are in Appendix C. Below the measures and instructions associated with each scale are described in greater detail. Also, since the focus of this study is on managers' behaviors and use of meetings, all meetings variables focused on only meetings led by the manager (e.g. Baran & Shanock, 2010). Thus, the meetings of interest for this study include only those called and led by a manager/supervisor where 3 or more individuals (i.e. employees and manager/supervisor) come together to discuss a work-related matter.

Participation in Decision Making was assessed using a nine item measure adapted from Seigel and Ruh (1973) focusing on the degree to which employees are given the opportunity to assist in decision making in meeting contexts. Participants were asked to "Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following:". Sample items include "Ensure employees participate in decision making about their jobs" and "Give employees the opportunity to express concerns about the decisions made". Ratings were made using a 5-point scale ranging from 1 being "never" to 5 being "always.

Freedom of Speech/Voice was assessed using a seven item measure adapted from Gordon & Infante (1980) focusing on the degree to which employees felt they had voice and freedom to discuss concerns in the meeting context. Participants were asked to "Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following:". Sample items include "Give employees time to express concerns about company policies" and "Ensure employees' feel they have freedom of speech". Ratings were made using a 5-point scale ranging from 1 being "never" to 5 being "always.

Meeting procedural justice/fairness was assessed using a ten item measure adapted from Moorman (1991) focusing on the degree to which meeting procedures are applied in a just and fair manner. Participants were asked to “Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following:”. Sample items include “Invite employees to the meeting that represent all sides of the issues to be discussed” and “Ensure multiple view-points are considered in each meeting”. Ratings were made using a 5-point scale ranging from 1 being “never” to 5 being “always.

Time courtesy meeting behaviors were assessed using a five item measure adapted from Baran and Shanock (2010) focusing on how the manager schedules and uses meeting time. Participants were asked to “Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following:”. Sample items include “Start meetings on time” and “End meetings when they are expected to end”. Ratings were made using a 5-point scale ranging from 1 being “never” to 5 being “always.

Agenda Usage was measured with six items assessing the degree to which and how the manager uses the agenda (Cohen et al., 2010; Leach et al., 2009). Instructions read “Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following:”. Sample items include “provide an agenda for the meeting” and “make the agenda available before the meeting”. Ratings were made using a 5-point scale ranging from 1 being “never” to 5 being “always.

Meeting load was assessed using 2 items designed to assess the amount of meetings unit employees have with their supervisor/manager (Baran & Shanock, 2010). These items asked questions concerning the number of meetings and amount of time spent in meetings with their supervisor (e.g. how many meetings do you attend in a typical week that are led by your supervisor/manager?) (Luong & Rogelberg, 2005).

Meeting relevance was assessed using seven items adapted from Sawyer's (1992) goal and process clarity scale. The items were modified to assess whether supervisor-led meetings are relevant to the accomplishment of work goals. Sample items include "Meetings led by my supervisor are relevant to my job" and "Meetings led by my supervisor clarify my duties and responsibilities". Items were assessed using a 5-point scale ranging from 1 being "strongly disagree" to 5 being "strongly agree".

Meeting size was assessed using two items designed to assess the average size of employees' supervisor led meetings (Cohen, Rogelberg, Allen, & Luong, 2010). The first item asked "On average, how many people attend the meetings led by your supervisor?" The second item asked "In thinking about your meetings with your supervisor, indicate the percentage that have" followed by response options including "3 to 4 total attendees (including you)", "5 to 6 total attendees (including you)", and so on.

Psychological Conditions for Engagement. Psychological conditions for engagement were assessed using a combination of items developed by May, Gilson, and Harter (2004) and items from the Empowerment at Work Scale developed by Spreitzer (1995). All scales were rated using a 5-point scale ranging from 1 being "strongly disagree" to 5 being "strongly agree". Instructions for each scale state "Think about the work that you do. Indicate the extent to which you agree or disagree with the following statements". *Meaningfulness* was assessed using six items by May et al. (2004). Sample items include "the work I do on this job is very important to me" and "my job activities are significant to me". *Psychological Safety* was assessed using three items by May et al. (2004), four items by Spreitzer (1995) and one additional item developed for this study (i.e. "my work environment is predictable). Based on Kahn's (1990) original definitions, the predictability and consistency of the work environment is an important component of psychological safety that was lacking in previous measures of this psychological condition. Additional sample items include "My work environment is non-threatening" and "When I make a mistake, it is never held against me". *Psychological Availability* was assessed using five items developed by May et al. (2004). Sample items include "I am confident in my ability to handle competing demands at work" and "I am confident in my ability to deal with problems that come up at work".

Employee Engagement was assessed using the Utrecht Work Engagement Scale (UWES) designed to assess overall employee engagement (Schaufeli & Bakker, 2003). This is a 16 item measure designed to assess three facets of employee engagement: vigor, dedication, and absorption. The instructions read "The following statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job". Sample items include "At my work, I feel bursting with energy", "I find the work that I do full of meaning and purpose", and "Time flies when I am working". Ratings were made on a 5-point scale, ranging from 1 being "never" to 5 being "always". Research evidence indicates that the three dimensions of work engagement are highly correlated (e.g. $r > .65$) (Schaufeli and Salanova, 2007). Several engagement researchers suggest that the high correlation between the three dimensions of work engagement indicates that the composite score of work engagement can be used for empirical research (Bakker, Schaufeli, Leiter, & Taris, 2008; Bakker and Demerouti, 2008). In the present study the mean correlation between the three dimensions was found to be consistent with previous research (*average r* = .70). Many researchers recently used the composite score of work engagement in their respective studies (Mauno, Kinnunen, Makikangas & Natti, 2005; Halbesleben & Wheeler, 2008). Thus, because of this high correlation and given the methodological precedence and parsimony, the above suggestion was followed and the mean value of the 16 items comprising the UWES was computed to form an overall score for employee engagement for each respondent.

Analysis Plan

The hypothesized model (see Figure 1) was tested using structural equation modeling with LISREL 8.80. First, simple bivariate correlations were computed to determine whether the relationships were in the direction proposed. Second, confirmatory factor analysis was used to test our measurement model and verify that the measures are distinct from one another (i.e. discriminant validity). Following previous research recommendations (May et al., 2004; Edmondson, 1999, etc.), confirmatory factor analysis was used to assess the factor structure of the study variables. The chi-square difference test was used to assess which model is a better approximation of the variance-covariance matrix and thus a better fit for the data. Third, the mediation hypotheses were tested using SEM to determine the amount of variance (effect size) explained in the dependent variable (employee engagement) by the independent variables (e.g. participation in decision making, freedom of speech, meeting size, etc.) through the mediating variables (psychological conditions). Additionally, given the time-lag assessment of engagement, the mediation model was tested using the time-lag assessment of engagement (Schumacker & Lomax, 2004). This provides a clear picture of the effects of the IVs and mediators on the DV while mitigating concerns about common-method bias.

To test the mediation hypotheses, the steps described by Kenny, Kashy, and Bolger (1998) were followed. SEM allows for a more definitive test of mediation than the traditional approach using multiple regression (Baron & Kenny, 1986) because both direct and indirect effects are specified in the same model. In the Kenny et al. (1998) approach, one is required to demonstrate that the independent variable is significantly associated with the mediator and that the mediator is significantly associated with the outcome variables, controlling for the independent variable. These relationships among the proposed variables were assessed by bivariate correlation analysis and SEM. The final step in the Kenny et al. (1998) mediation process involves the calculation of the indirect relationship of the independent variables with the outcome variable through the mediator. The Sobel (1982) test was used to show the statistical significance of indirect effects.

Several alternative models are tested including a partial mediation model which adds a direct path from the various components of the mangers' strategic use of meetings and overall employee engagement. For all models tested, goodness of fit indices were reported including the exact fit test (i.e. chi-square) as well as several approximate fit indices (e.g. RMSEA, TLI, and CFI).

CHAPTER 5: RESULTS

Descriptive Statistics

Means, standard deviations, internal reliabilities, and intercorrelations among the variables used in this study are reported in Table 1. All measures showed acceptable internal reliabilities ($\alpha > .80$). It should be noted that the correlations between participation in decision making, freedom of speech, and justice/fairness in meetings are quite high ($r > .70$) suggesting overlap among these constructs. The confirmatory factory analyses discussed in detail below, however, show distinctions among these variables and provide evidence of construct validity. Unexpectedly, the meeting load and meeting size variables show mostly non-significant correlations with both the psychological conditions and overall employee engagement. All variables appear to be normally distributed except meaningfulness, availability, and employee engagement. Tests for skewness and kurtosis showed that meaningfulness was slightly negatively skewed and leptokurtic, availability was slightly platokurtic, and employee engagement was slightly leptokurtic. However, none of the values for skewness or kurtosis were adequately extreme to suggest the need for transformation (Cohen, Cohen, West, & Aiken, 2003). Regression based statistics are considered robust against violations of the assumption of normality (Howell, 2007). Because SEM is a regression based analysis, violations of the assumptions of normality must be extreme before warranting transformations of variables.

TABLE 1: Means, Standard Deviations, and Intercorrelations of all Measures

		M	SD	1	2	3	4	5
1.	Participation in Decision Making	3.06	.95	(.95)				
2.	Freedom of Speech	3.47	.96	.82*	(.93)			
3.	Justice/Fairness	3.31	.85	.79*	.75*	(.92)		
4.	Time Courtesy	3.83	.76	.54*	.56*	.56*	(.86)	
5.	Agenda Usage	3.09	1.05	.58*	.52*	.57*	.46*	(.92)
6.	Meeting Load (# of meetings)	1.63	1.91	.07	.03	.12*	-.09	-.07
7.	Meeting Load (Hrs. in meetings)	2.32	2.69	.14*	.07	.19*	-.05	.02
8.	Meeting Relevance	3.66	.90	.70*	.68*	.70*	.53*	.47*
9.	Meeting Size (# of attendees)	8.41	5.64	-.01	-.04	.01	.07	.01
10.	Meeting Size (relative size)	2.72	1.74	-.03	-.07	-.01	.05	.04
11.	Meaningfulness	4.13	.77	.26*	.26*	.28*	.31*	.20*
12.	Safety	3.79	.64	.57*	.55*	.47*	.40*	.35*
13.	Availability	4.37	.50	.09	.11*	.14*	.18*	.07
14.	Employee Engagement	3.70	.59	.35*	.29*	.32*	.31*	.23*
15.	Vigor	3.66	.60	.35*	.30*	.31*	.35*	.25*
16.	Dedication	3.91	.74	.35*	.30*	.35*	.34*	.25*
17.	Absorption	3.56	.65	.27*	.19*	.22*	.17*	.12*

Note: N = 319. Diagonal values are the internal consistency estimates for each scale. * = $p < .05$ (2-tailed).

TABLE 1 (continued)

6	7	8	9	10	11	12	13	14	15	16	17
-											
.78*	-										
.06	.10	(.95)									
-.06	-.08	.02	-								
-.06	-.09	-.02	.46*	-							
-.01	.02	.32*	.07	-.02	(.95)						
-.03	.05	.42*	.01	-.03	.32*	(.82)					
.08	.05	.05	.07	.01	.26*	.30*	(.87)				
-.01	.04	.32*	.12*	.04	.74*	.42*	.30*	(.93)			
-.03	.01	.32*	.10	.01	.65*	.45*	.40*	.90*	(.81)		
-.04	.01	.34*	.09	.03	.81*	.41*	.22*	.90*	.76*	(.89).	
.04	.10	.21*	.13*	.09	.56*	.29*	.20*	.88*	.69*	.67*	(.81)

Discriminant Validity of the Constructs

The discriminant validity of the constructs was assessed using confirmatory factor analysis in LISREL 8.80. Tables 2, 3, and 4 provide summary statistics and fit indices for the confirmatory factor analyses used to assess the measurement model.

A confirmatory factor analysis was conducted to examine the distinctiveness of the eight strategic use of meetings variables. The model fit for each of the seven nested models was compared ranging from a single-factor model to an eight-factor model including (e.g. Rahim & Magner, 1995; Lance & Vandenberg, 2002) (see Table 2 for model descriptions). Table 2 shows the results of these analyses.

Considering several fit statistics, the eight-factor model showed the best overall fit. Although each more differentiated model showed a significantly better chi-square statistic (James, Mulaik, & Brett, 1982), in comparison with the other models, only the eight-factor model showed better root-mean-square errors of approximation (RMSEA: Browne & Cudeck, 1993) and had both comparative fit index (CFI: Bentler, 1990) and Tucker-Lewis Index (TLI: Tucker & Lewis, 1973) values above their recommended cutoffs of .90. All items in the eight-factor model loaded reliably on their predicted factors; the lowest loading was .35. However, the correlation between the latent factors of participation in decision making and freedom of speech in meetings was .82, which is slightly above the cutoff (> .80) considered to indicate multicollinearity (Tabachnick & Fidell, 2001), suggesting the factors may be representing the same underlying construct. However, considering that the pilot testing analyses (e.g. EFA) indicated that these two factors were distinct, ample research and theory supports the distinction, and the correlation is exceptionally close to the cutoff, there appears to be some gain in distinguishing between participation in decision making and freedom of speech.

TABLE 2: Confirmatory Factor Analyses for Strategic Use of Meetings Measures

Model	CFI	TLI	χ^2	df	Difference	RMSEA
One-factor	.92	.92	6541.71*	1080		.15
Two-factor	.93	.92	5758.68*	1079	783.03*	.13
Three-factor	.94	.94	5108.00*	1077	650.68*	.12

TABLE 2 (continued)

Four-factor	.95	.95	4717.88*	1074	390.12*	.11
Five-factor	.96	.95	4134.44*	1070	583.44*	.10
Six-factor	.96	.96	3817.48*	1065	316.96*	.10
Seven-factor	.97	.97	3246.47*	1059	571.01*	.09
Eight-factor	.97	.97	3161.30*	1052	85.17*	.08

Note. N = 319. The one-factor model includes all strategic use of meetings measures combined. The two-factor model separates participation in decision making (PDM), freedom of speech (FS), justice/fairness (JF), and time courtesy (TC) into Factor 1 and agenda usage (A), meeting load (ML), meeting relevance (MR), and meeting size (MS) into Factor 2. The three-factor model separates PDM, and FS into Factor 1, JF, TC, and A into Factor 2, and ML, MR, and MS into Factor 3. The four-factor model separates PDM into Factor 1, FS into Factor 2, JF, TC, and A into Factor 3, and ML, MR, and MS into Factor 4. The five-factor model separates PDM into Factor 1, FS into Factor 2, JF into Factor 3, TC and A into Factor 4, and ML, MR, and MS into Factor 5. The six-factor model separates PDM into Factor 1, FS into Factor 2, JF into Factor 3, TC and A into Factor 4, ML into Factor 5, and MR and MS into Factor 6. The seven-factor model separates PDM into Factor 1, FS into Factor 2, JF into Factor 3, TC into Factor 4, A into Factor 5, ML into Factor 6, and MR and MS into Factor 7. The eight-factor model separates each measure into distinct factors. CFI = comparative fit index; TLI = Tucker-Lewis index; Difference = difference in chi-square from the next model; RMSEA = root-mean-square error of approximation. * $p < .05$.

A second confirmatory factor analysis was conducted to examine the distinctiveness of the psychological conditions of engagement variables. The model fit for each of the four nested models was compared ranging from a single-factor model to a three-factor model including, (a) a one-factor model that includes all psychological conditions of engagement measures (meaningfulness, safety, and availability) combined; (b) a two-factor model that separates meaningfulness into Factor 1 and safety and availability into Factor 2; (c) a two-factor model that separates safety into Factor 1 and meaningfulness and availability into Factor 2; (d) a two-factor model that separates availability into Factor 1 and meaningfulness and safety into Factor 2; and (e) a three-factor model which separates each measure into distinct factors. Table 3 shows the results of these analyses.

Considering several fit statistics, the three-factor model showed the best overall fit. Although each more differentiated (e.g. one-factor vs. two-factor vs. three-factor) model showed a significantly better chi-square statistic (James, Mulaik, & Brett, 1982), in comparison with the other models, the three-factor model showed better RMSEA (Browne & Cudeck, 1993) and had both CFI (Bentler, 1990) and TLI (Tucker & Lewis, 1973) values above their recommended cutoffs of .90. All items in the three-factor model loaded reliably on their predicted factors; the lowest loading was .30.

TABLE 3: Confirmatory Factor Analyses for Psychological Conditions of Engagement

Model	CFI	TLI	χ^2	df	Difference[a]	RMSEA
One-factor	.76	.73	1759.17*	152		.23
Two-factor[1]	.87	.86	973.21*	151	785.96*	.17
Two-factor[2]	.84	.82	1214.32*	151	544.85*	.18
Two-factor[3]	.87	.86	976.67*	151	782.50*	.17
Three factor	.96	.96	404.02*	149	569.19*	.07

Note. *N* = 319. The one-factor model includes all psychological conditions of engagement measures (meaningfulness, safety, and availability) combined. The Two-factor[1] model separates meaningfulness into Factor 1 and safety and availability into Factor 2. The Two-factor[2] model separates safety into Factor 1 and meaningfulness and availability into Factor 2. The Two-factor[3] model that separates availability into Factor 1 and meaningfulness and safety into Factor 2; The three factor model separates each measure into distinct factors. CFI = comparative fit index; TLI = Tucker-Lewis index; Difference = difference in chi-square from the previous (lower factor) model. Also, [a] indicates the chi-square difference test for the two-factor models are all compared to the one-factor model.; RMSEA = root-mean-square error of approximation. * $p < .05$.

A third confirmatory factor analysis was conducted to further examine the nature of the employee engagement variable. As previously mentioned, researchers have used the UWES to assess engagement as a single factor as well as a three factor construct. Therefore, the measure was tested to confirm a one-factor structure fit this particular dataset. The model fit was assessed for the one-factor model that includes all employee engagement measures (vigor, dedication, and absorption) combined. Table 4 shows the results of this analysis.

The one-factor model showed adequate fit with both the Comparative Fit Index (CFI: Bentler, 1990) and Tucker-Lewis Index (TLI: Tucker & Lewis, 1973) values above their recommended cutoffs of .90. All items in the one-factor model loaded reliably; the lowest loading was .30. However, the root mean square error of approximation (RMSEA; Browne & Cudeck, 1993) was not at conventional levels of acceptable fit (RMSEA < .10; Tabachnick & Fidell, 2001). Because the CFI and TLI values were above .90, one could argue that the one-factor model has adequate fit because it is more parsimonious than any alternative (e.g. two- or three-factor models). In addition, previous research and theory support the use of a one-factor model of engagement (Bakker, Schaufeli, Leiter, & Taris, 2008; Bakker and Demerouti, 2008). Thus, the proposed and alternative models were tested using a one-factor model of employee engagement.

TABLE 4: Confirmatory Factor Analyses for Employee Engagement

Model	CFI	TLI	χ^2	df	RMSEA
One-factor	.93	.93	671.33*	119	.13

Note. *N* = 319. The one-factor model includes all employee engagement measures (vigor, dedication, and absorption) combined. CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root-mean-square error of approximation. * $p < .05$.

Proposed Model and Hypotheses

Figure 2 shows the standardized path coefficients estimated by LISREL 8.80 for the proposed full-mediation model. Two other models were tested as comparison points for assessing the efficacy of the proposed model (see Figure 1) in explaining the relationships hypothesized: a direct effects model and a partial mediation model.

Hypotheses 1a-b. For the portion of the model predicting meaningfulness, one of the two path coefficients was significant and had the expected sign. Participation in decision making (H1a) had a significant positive relationship with meaningfulness (β = .23, $p < .05$). In addition, both participation in decision making (H1a) and freedom of speech (H1b) had significant positive correlations with meaningfulness (r = .26 and .26, $p < .05$). These results provide support for Hypothesis 1a and partial support for Hypothesis 1b.

Hypotheses 2a-c. For the portion of the model predicting psychological safety, two of the three path coefficients were significant and in the expected direction (positive). Justice/fairness (H2a) and time courtesy (H2b) both had significant positive relations with psychological safety (β = .43 and .17, respectively, $p < .05$). In addition, all three predictors of safety--justice/fairness (H2a), time courtesy (H2b), and agenda usage (H2c)--showed significant positive correlations with safety (r = .47, .40, and .35, respectively, $p < .05$). These results provide support for Hypotheses 2a and b, and partial support for Hypothesis 2c.

Hypotheses 3a-c. For the portion of the model predicting psychological availability, none of the three path coefficients were significant ($p > .05$). In addition, none of the three predictors, meeting frequency (H3a), meeting relevance (H3b), and meeting size (H3c), showed significant correlations with availability. These results do not support Hypotheses 3a-c. However, Hypothesis 3a suggested a curvilinear relationship between meeting load and availability. Although the zero-order correlation is non-significant, it is possible that the curvilinear function is adequately strong so as to eliminate the detection of a linear effect. Thus, to further test this relationship, curvilinear regression analysis using the quadratic function of meeting load was tested. The analysis showed non-significant results ($\beta = .20$, $p > .05$). These results further indicate a lack of support for Hypothesis 3a.

Hypotheses 4a-c. For the portion of the model predicting overall employee engagement, two of the three path coefficients were significant and had the expected sign. Psychological meaningfulness (H4a) and safety (H4b) both had significant positive relations with engagement ($\beta = .76$ and .24, respectively, $p < .05$). In addition, all three predictors of engagement, psychological meaningfulness (H4a), safety (H4b), and availability (H4c) showed significant positive correlations with employee engagement ($r = .74$, .42, and .30, respectively, $p < .05$). These results provide support for Hypotheses 4a and b, and partial support for Hypothesis 4c.

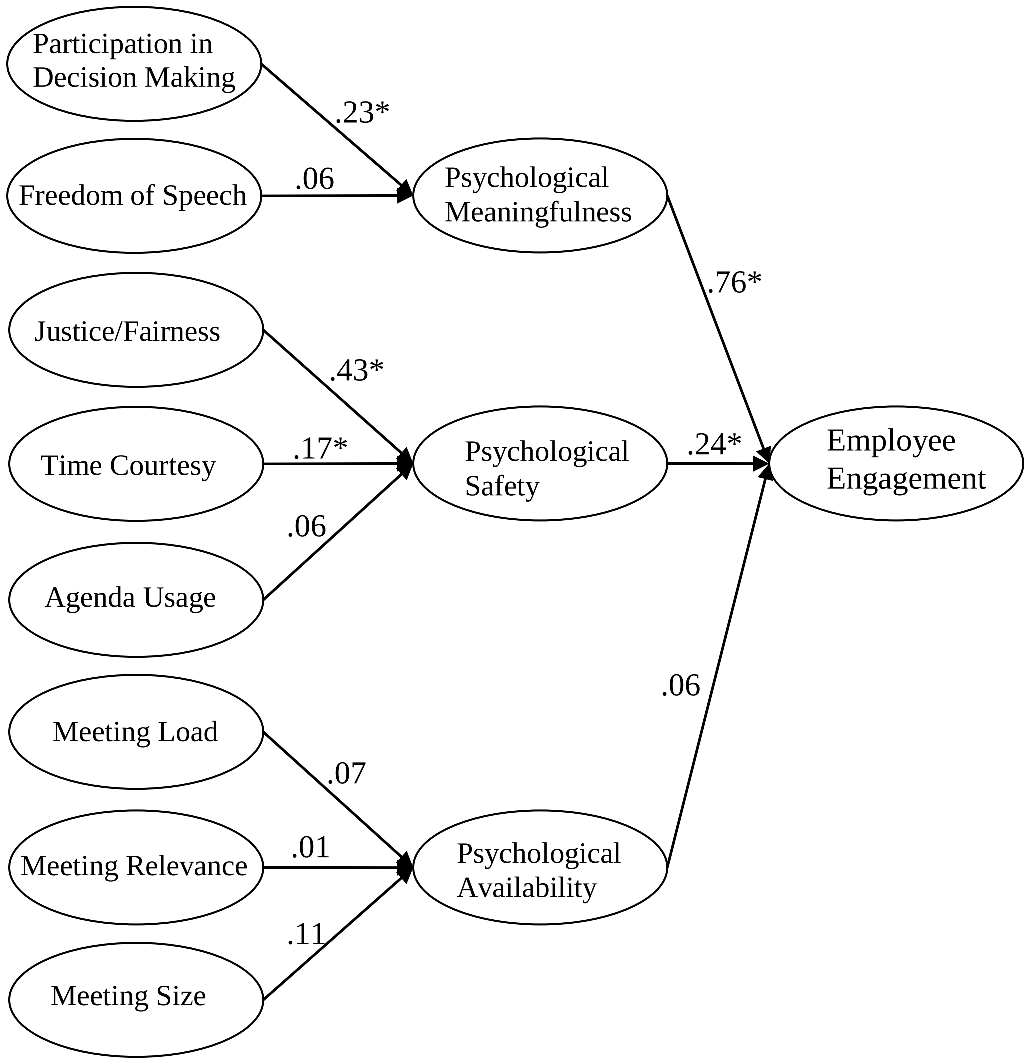

Figure 2: Full Mediation Model with Standardized Path Coefficients *p < .05

Hypothesis 5. Structural equation modeling with LISREL 8.80 was used to test the hypothesized model presented in Figure 1 as well as several additional models (see Table 5). The proposed full-mediation model showed good fit, $\chi^2(3363) = 7215.14$, $p < .05$; RMSEA = .06, TLI = .97, CFI = .97. To test the meditational hypothesis, the steps described by Kenny, Kashy, and Bolger (1998) were followed. In support of these steps, regarding psychological meaningfulness as a potential mediator, participation in decision making was related to psychological meaningfulness. Also, meaningfulness was related to employee engagement controlling for participation in decision making. Regarding psychological safety as a mediator, both justice/fairness and time courtesy related to psychological safety. Also, safety was related to employee engagement after controlling for justice/fairness and time courtesy. Psychological availability did not appear to operate in such a way as to support these initial steps, thus it is concluded that it does not mediate between any of its proposed predictors and employee engagement.

The final step in the Kenny et al. mediation process involves the calculation of the indirect relationship of the independent variable with the outcome variable through the mediator. As previously mentioned, the Sobel test is commonly used to show the statistical significance of indirect effects. Consistent with this procedure, the Sobel test indicated that psychological meaningfulness fully mediates the relationship between participation in decision making and employee engagement (β = .17, z = 1.97, p < .05). Additionally, the Sobel test indicated that psychological safety fully mediates the relationship between justice/fairness and employee engagement (β =.10, z = 3.73, p < .05) and between time courtesy and employee engagement (β = .04, z = 2.00, p < .05).

As an alternative test of the proposed model, a partial mediation model was tested in which a direct path from each of the meetings variables to engagement was added. None of these direct paths were statistically significant. Additionally, the approximate fit indices (i.e. CFI, TLI, and RMSEA) for this partial mediation model were the same as the full mediation model. Further, since the partial mediation model is nested within the full mediation model, the chi-square difference test is an appropriate statistic for comparing these two models. Interestingly, the test showed a non-significant reduction in the chi-square statistic ($\chi^2(8)$ *difference* = 7.80, $p > .05$), suggesting that the partial mediation model does not represent the data better than the full mediation model. All these results, taken together, provide support for Hypothesis 5.

Development and Evaluation of an Alternative Model

An alternative model was tested based on previous research, theory and the initial data analyses. Specifically, job characteristics theory supports the possibility that the meetings variables may affect more than one psychological condition. According to job characteristics theory, features of one's work environment (e.g. skill variety) impact the development of employee attitudes and behaviors (Hackman & Lawler, 1971). Hackman and Oldham (1976) confirm that employee job characteristics impact the development of various psychological conditions which then affects their job satisfaction, absenteeism, and motivation. Recent research using similar methods and statistical analyses to those used in the current study illustrate how job characteristics (e.g. task significance) relate to multiple psychological conditions simultaneously (e.g. Stumpp, Hulsheger, Muck, & Maier, 2009). For example, Stumpp et al. (2009) hypothesized and showed that task significance, a job characteristic, relates to overall life satisfaction through various job-related psychological conditions (e.g. organizational commitment).

Akin to this research, meetings represent a job characteristic that could possibly relate to various psychological conditions of employees simultaneously. For example, time courtesy may be related to psychological meaningfulness and availability, in addition to being related to safety. As previously discussed, managers influence their employees' use of time on the job (Perlow, 1998). Pertaining to meetings, managers can call meetings at appropriate times, start and end on-time, and provide adequate notice concerning upcoming meetings. These sorts of behaviors ensure predictability in the work environment (i.e. psychological safety), but may also provide meaningfulness to the employee by showing that the manager cares about their employees' time. Additionally, by scheduling meetings in an appropriate manner (e.g. not over-scheduling meetings), managers do not infringe upon employees' time, a scarce resource that is likely related to employees' availability to engage. In a similar fashion, it is believed that other meetings variables (e.g. freedom of speech) are likely to relate to one or more of the psychological conditions for engagement. Therefore, the alternative model allows the meetings variables to predict each of the psychological conditions (see Figure 3).

In addition, initial data analysis of the proposed model suggests several important modifications to the alternative model. Several of the hypothesized paths between the meetings variables and the psychological conditions for engagement were non-significant (e.g. freedom of speech to meaningfulness, agenda usage to safety, and meeting load to availability). Although some researchers would suggest removing these paths entirely (e.g. May et al., 2004; Schumacker & Lomax, 2004), it seemed important to also consider the zero-order correlations between the meetings variables and the psychological conditions for engagement. Of the variables that appear unrelated to the psychological conditions in the proposed model, only two show little or no relationship to both the psychological conditions and overall engagement: meeting load and meeting size. Therefore, in addition to allowing the meetings variables to relate to multiple psychological conditions, both meeting load and meeting size were removed from the model (see Figure 3). As a check, the model was estimated with and without these two variables and the chi-square difference test showed a non-significant change ($\chi^2(6)$

difference = 4.17, $p > .05$), suggesting the removal of these paths did not affect the overall fit of the alternative model.

To aid in interpretation, Figure 4 provides a depiction of the alternative model with only the significant path coefficients labeled. Although the fit indices appear generally the same across the models, the chi-square value appears to show improvement from the initially proposed model to alternative model. The alternative model appears to have the best fit, $\chi^2(3347) = 7146.17$, $p < .05$; RMSEA = .06, TLI = .97, CFI = .97. Further, since the alternative model is nested within the full mediation model, the chi-square difference test is an appropriate statistic for comparing these two models. Interestingly, the test showed a significant reduction in the chi-square statistic ($\chi^2(10)$ *difference* = 68.97, $p < .05$), suggesting that the alternative model represents the data better than the original model.

The alternative model also identified five full-mediation relationships between the strategic use of meetings and employee engagement through the psychological conditions for engagement. Psychological safety appears to mediate the relationship between three meetings variables (i.e. participation in decision making, freedom of speech, and time courtesy) and overall employee engagement. Psychological meaningfulness appears to mediate the relationship between two meetings variables (i.e. time courtesy and meeting relevance) and overall employee engagement. Each of these mediated relationships are confirmed using the Sobel test (see Table 5).

TABLE 5: Sobel tests of full mediation in alternative model.

Model	***β***	***z***
1. PDM → S → EE	.12*	3.14
2. FS → S → EE	.07*	2.24
3. TC → S → EE	.05*	2.31
4. TC → M → EE	.19*	2.71
5. MR → M → EE	.17*	2.50

Note. N = 319. *p < .05. PDM = participation in decision making, FS = freedom of speech, TC = time courtesy, MR = meeting relevance, S = Safety, M = meaningfulness, and EE = employee engagement.

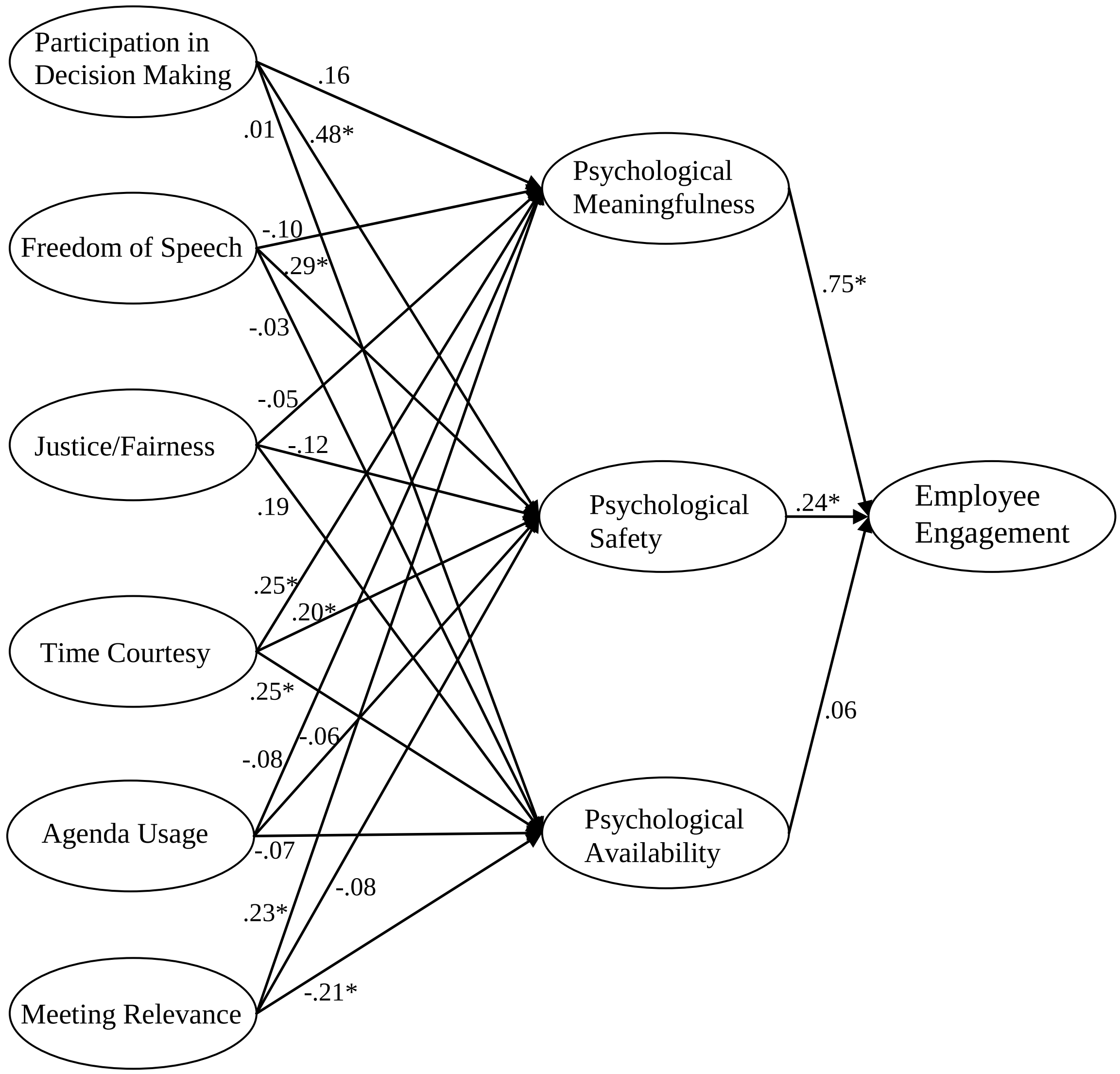

Figure 3: Alternative Model with Standardized Path Coefficients *p < .05

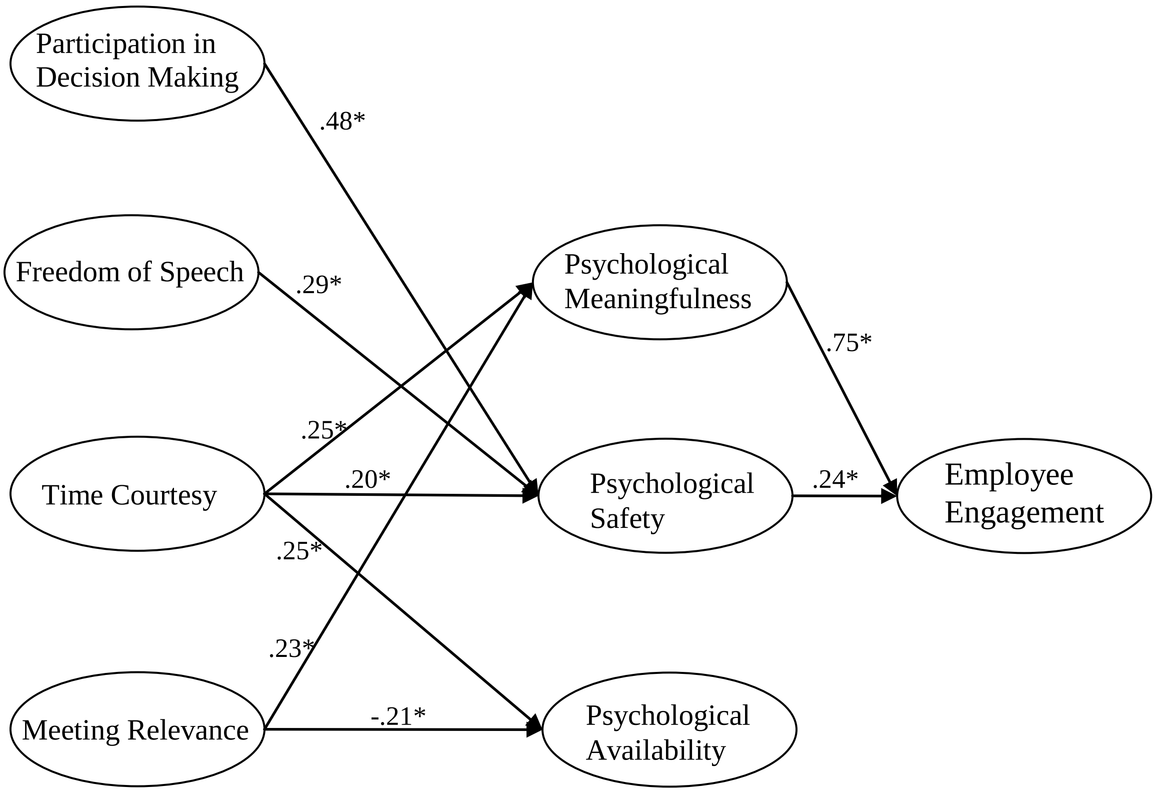

Figure 4: Alternative model with ONLY the significant Standardized Path Coefficients shown *p < .05

CHAPTER 6: DISCUSSION

Summary of Findings

This study investigated the relationship between managers' strategic use of meetings and overall employee engagement. The results suggest that mangers' strategic use of meetings is a meaningful predictor of the psychological conditions for employee engagement. Specifically, participation in decision making, freedom of speech, time courtesy in meetings, and meeting relevance are related to one or more of the psychological conditions for engagement. More importantly, it appears as though workplace meetings are a useful context for the development of employee engagement.

The alternative model, which received the greatest amount of empirical support, illustrated a total of five full-mediation relationships between several of the meetings variables and employee engagement (see Table 5). That is, managers' use of meetings influences employee engagement, but only through their relationship to the psychological conditions for engagement. Managers' time courtesy in meetings and the relevance of the meetings they call are related to engagement through psychological meaningfulness. This suggests that when managers call meetings on time and those meetings actually matter to an employee's job, the employee finds meaning in their job and they appear more likely to engage in their work. Further, participation in decision making in meetings, freedom of speech, and manager's time courtesy behaviors are related to employee engagement through psychological safety. Thus, managers who encourage their employees to participate in meetings, help them speak up concerning the topics discussed, and end the meetings on time are likely to help their employees feel safe to bring their whole-self to work and engage. In sum, the findings suggest that managers who encourage participation, provide for open discussions, and start/end on time are likely to promote the psychological conditions necessary for an engaged workforce.

Theoretical Explanation of Mediation Effects

One explanation for these mediating effects stems from psychological contract theory. According to Kahn (1990), “these [psychological conditions] are like conditions in fleeting contracts; if certain conditions are met to some acceptable degree, people can personally engage in moments of task behaviors” (p. 703). That is, people tend to enter into to contracts that contain clear and desired benefits when they believe they possess the resources necessary to meet the contracted obligations (Rousseau, 1989). When managers promote these psychological conditions, individuals begin to feel “contractually obligated” to incorporate their whole self in the work (Kahn, 1990).

This study looked at a context where the psychological contract approach to Kahn’s psychological engagement is realized and enacted in organizations. When managers in organizations provide for the development of these psychological conditions in meetings, employees may feel obligated to reciprocate by incorporating more of their self in the work (i.e. engage more). For example, when a manager makes efforts to consistently provide opportunities for employees to participate in decisions related to their jobs in meetings, employees’ may notice this effort and reciprocate in similar effortful behavior. A sort of informal work-related contract develops between the manager and his/her employees. Employees begin to expect opportunities to voice concerns, participate in decision-making, and meet at appropriate times. Managers begin to expect that employees will participate and put forth effort outside the meeting setting to accomplish the goals, plans, and decisions made collaboratively within the meeting. According to Kahn (1990), the psychological conditions for engagement are directly promoted through this informal contract between employees and their supervisors.

Explanation of Direct Effects

Contrary to expectations, psychological availability did not mediate between any of the meetings variables and overall employee engagement. However, managers' time courtesy behaviors appear to positively relate to psychological availability directly (see Figure 4). As previously stated, psychological availability refers to employees' sense of possessing physical, emotional, and psychological resources necessary for investing self-in-role performances. Intuitively, when managers are time courteous in the way they call and run meetings, employees may have more time to do their other work. More importantly, by being time courteous, managers help their employees by announcing upcoming meetings well in advance. This allows employees to schedule their work around meetings. Since time is a scarce resource in organizations, it stands to reason that providing more of this resource may help employees' engage.

Explanation of Unsupported Relationships

Not all the meetings variables, however, affected the psychological conditions for engagement or overall engagement. As shown in the alternative model, justice/fairness in meetings and agenda usage did not show significant relations to any of the psychological conditions. It is unclear why these particular meetings characteristics/behaviors do not relate to the psychological conditions for engagement, especially in light of previous research. For example, previous research shows that having an agenda and providing access to it prior to the meeting are important meeting characteristics related to overall meeting quality/effectiveness (Cohen et al., 2009; Leach et al., 2009). In this study, simple correlations suggest that agenda usage is positively related to psychological meaningfulness and safety, as well as overall engagement. However, the alternative model shows no such relationship between agenda usage and the various psychological conditions for engagement or overall engagement.

One potential explanation for the null findings concerning agenda usage may be the conceptual overlap between this concept and others that were assessed. Employees may assess the relevance of their supervisor-led meetings based on the topics on the agenda (Cohen et al., 2010). Additionally, the topics help employees know whether their participation will be needed or desired. Since the current study assessed both meeting relevance and participation in decision making, two important components of agenda usage are accounted for by these variables. Therefore, what remains of the agenda usage concept (e.g. when it is delivered) appears to be unrelated to the psychological conditions for engagement within the model.

Also, justice/fairness in meetings appears unrelated to the psychological conditions for engagement and overall engagement. This finding may result from overlap between justice/fairness and other meetings variables. Participation in decision making, freedom of speech, and justice/fairness in meetings had average intercorrelations of greater than .70. Additionally, the path coefficient between justice/fairness and safety was significant in the proposed model, but not in the alternative model. This suggests that justice/fairness does not explain sufficient additional variance to be significantly related to safety when participation in decision making and freedom of speech are included as predictors of safety. In fact, it appears as though participation in decision making and justice/fairness may occupy the same construct space in relation to safety. To test this possibility, the alternative model was reanalyzed with participation in decision making removed. In this modified model, justice/fairness predicted safety similar to participation in decision making in the alternative model. However, the confirmatory factor analysis of the meetings variables suggested that these constructs are distinct factors. Further research should investigate the overlap between these variables and see if it is a function of shared construct space, sample-related issues, or measurement problems.

Two other meetings variables showed little or no relationship to any of the psychological conditions for engagement or overall engagement: meeting load and meeting size. Although these were removed from the alternative model, it is important to consider the implications of these null effects. Previous research would suggest that these two meetings variables should relate to employees' psychological states (e.g. Luong & Rogelberg, 2005). In fact, it is clear by virtue of the other findings that some level of meeting activity is necessary. However, one potential explanation for these findings could be the relative lack of managerial behavior associated with these meeting variables. That is, unlike the other meetings variables (e.g. encouragement of participation in decision making), these two particular variables require less active behavior on the part of the manager. This is particularly apparent with the meeting size variable. Prevalence statistics show that the most common meeting type in organizations is the staff meeting, which is typically run by the supervisor (Romano & Nunamaker, 2001). Unless the manager fires and hires employees regularly, the size of their supervisor-led meetings (i.e. staff meeting) is likely to be relatively static. Additionally, recent research on position imprints suggests that previous manager routines and behaviors are likely to continue with subsequent managers, at least initially (Burton & Beckham, 2007). Thus, the frequency of supervisor-led meetings may also be relatively unchanged across managers.

Another unsupported relationship is the hypothesized positive relationship between meeting relevance and psychological availability. Meeting relevance is related to psychological availability, but the direction of the relationship is negative. One potential explanation is that meetings that are relevant may also increase employees' workload (e.g. change in project direction or scope) more than they increase their resources. However, the zero-order correlation between meeting relevance and psychological availability is not significant and slightly positive. Thus, even though the model showed a significant negative relationship, it is possible that this relationship is an analytical artifact. This type of sign reversal suggests the possibility of a suppressor effect, the nature of which is not readily apparent within the data. That is, it does not meet the criteria for a true suppressor variable (see Pedhazur, 1982). Meeting relevance has a moderate correlation with the criterion (engagement). It is correlated with the other predictor variable (availability). However, its inclusion in the model does not actually appear to suppress or control for irrelevant variance that is shared with the predictor (availability) and the criterion (engagement) (May et al., 2004). To substantiate this latter claim, a model with meeting relevance removed was tested to see if the path coefficient between availability and engagement would become significant. Since the relationship between availability and engagement was still non-significant, it is believed that this is not a true suppressor effect.

Implications for Engagement Research and Theory

The current study contributes to the engagement literature by illustrating the connection between the psychological conditions for engagement and overall employee engagement. By doing so, this study begins to integrate the disparate models of engagement. Previous research tended to focus on either employee engagement (i.e. level of vigor, dedication, and absorption at work) or psychological engagement (i.e. physical, emotion, and cognitive investment in an activity). The proposed and alternative models showed that both psychological meaningfulness and psychological safety were related to employee engagement. This partially confirms previous work by May et al. (2004) while extending it using a measure of employee engagement rather than psychological engagement (UWES, Schaufeli & Bakker, 2003). These findings also suggest potential compatibility between these two prevalent conceptualizations of engagement. Kahn's (1990) original theory of psychological engagement argued that these psychological conditions (meaningfulness, safety, and availability) were necessary psychological states that must be met to a sufficient degree in order for a person to incorporate their whole self in their work. Employee engagement was primarily studied by organizational scholars and looked at from a job characteristics/resources perspective (e.g. Xanthopoulou et al., 2009). This study suggests employees may need to have certain psychological resources (i.e. conditions) in order to be able to fully engage in their work.

Another important implication for engagement research is that only two of the three psychological conditions for engagement appear to be related to overall employee engagement in the models tested. Psychological availability does not appear to significantly relate to overall employee engagement suggesting that the provision of physical, cognitive, and emotional resources for self-in-role performance may not be necessary for employees to engage. However, the zero-order correlation between availability and engagement was positive and significant (r =.30, $p < .05$). These somewhat contradictory results suggests that perhaps the other two psychological conditions are more strongly related to overall employee engagement and that the relationship between availability and employee engagement is subsumed by these other conditions. Thus, although Kahn (1990) and others (e.g. May et al., 2004) suggest that these psychological conditions are necessary for *psychological engagement*, not all appear necessary for *employee engagement*.

Another implication for engagement research is that the psychological conditions for engagement are important intervening factors between job characteristics/features and engagement. Many researchers have studied antecedents for engagement that might be described as job characteristics (e.g. Saks, 2006; Rich, LePine, & Crawford, 2010), but few have incorporated psychological intervening processes (e.g. May et al., 2004), and none have focused on a single work context. The current findings suggest that perhaps some of these previously studied antecedents (e.g. organizational support, supervisor support, and procedural justice) affect engagement through the development of psychological conditions. It is possible that some of these other studies may benefit from understanding how the employees develop psychologically and how that may affect the relationship between these traditional job attitudes/characteristics and employee engagement (Hackman & Lawler, 1971).

Implications for Meetings Research and Theory

Additionally, the current study contributes to the growing body of literature on meetings. The call to study meetings as an important social phenomenon was relatively recent (Rogelberg et al., 2006). As such, the literature base on meetings is rather nascent and many areas of inquiry exist for research. One area that seemed lacking in the meetings literature was a connection between workplace meetings and employee performance. Although recent research is beginning to bridge this gap (e.g. Rogelberg et al., 2010), no study has focused on how meetings affect employee and organizational performance. By showing a relationship between how managers use meetings and employee engagement, this study connects the function, structure, design, and execution of meetings to important employee outcomes. Since employee engagement is an important predictor of employee performance (Rich et al., 2010), showing that meetings can promote an engaged workforce illustrates their potential importance for achieving competitive advantage through improved performance. Therefore, this study adds to the legitimacy of researchers and practitioners growing focus on studying and improving meetings within organizations.

Another implication for meetings research and theory is the importance of supervisor-led meetings. Many types of meetings exist and research illustrates the various types, forms, and designs of meetings in organizations (Allen, Beck, Scott, & Rogelberg, 2010; Bluedorn, Turban, & Love, 1999). As previously discussed, one other study showed the importance of supervisor-led meetings in developing meeting citizenship behaviors as well as improving employee-supervisor relations (Baran & Shanock, 2010). These studies illustrate the focal importance of the supervisor-led meeting at developing employee attitudes and behaviors.

The findings concerning time courtesy in meetings provides another important implication for research and theory concerning meetings. Time courtesy in meetings fully predicted all three psychological conditions for engagement, even after considering all the other factors. Scholars who study time in organizations suggest that employees are constantly aware of the time they spend at work and vary in the way in which they manage their time (Peeters & Rutte, 2005; Perlow, 1999). The way a manager schedules and uses meetings from a time perspective is one way they interact with employees' time management and the ability of employees to manage their own workload. Additionally, employees have different time orientations (Bluedorn, Kalliath, Strube, & Martin, 1999) which may interact with the way managers call meetings. For example, whether employees are oriented to the clock or more laissez-fair, may impact the degree to which managers' timely use of meetings affects them.

These time courtesy findings, however, illustrate the importance of starting on time, ending on time, and calling meetings at appropriate times rather than overall volume of meetings. As previously shown, meeting load is not related to the psychological conditions for engagement or overall engagement. Although meeting load also infringes upon employees' time management, it does not appear to be related to employee engagement.

Practical Implications

The results provide for several implications for practitioners. The results suggest that organizations would experience an increase in employee engagement by having managers run their meetings better from a time perspective. Research (e.g. Rogelberg et al., 2006) and anecdotal evidence confirms that individuals tend to loath meetings and complain about the time wasted in meetings. Managers should start meetings on time, end them on time, and call meetings at convenient times. For example, managers should avoid calling meetings when employees are typically busy or unwilling to meet (e.g. 4pm on Friday afternoon). They should also be sure to schedule meetings with enough advance warning so that employees can fit the meeting in their work schedule.

Additionally, managers should encourage participation and freedom of speech in their meetings with employees. This is done by providing time in meetings for employees to share their ideas, opinions, and feedback on recent decisions and ongoing issues. For example, rather than ending each meeting by asking “are there any questions?”, managers should provide several opportunities within the meeting for employees to pose questions and voice concerns. Employees’ are typically anxious for meetings to end as they have other work tasks to perform. Thus, they are less likely to pose questions at the end of the meeting. Simply building Q&A opportunities into the meeting will promote both increased participation as well as feelings of voice among employees.

Further, managers should try to make their meetings more directly relevant to their employees. According to the current findings, employees that find their meetings more relevant appear to also find meaning in their work (i.e. meaningfulness) and may subsequently engage in their work. One way to accomplish this is by ensuring that the meetings have clear purposes that include clarifying job duties/responsibilities and establishing goals for employees' jobs. For example, rather than simply discussing the status of projects, managers should identify the outcomes and objectives of the project and connect it to the appropriate procedures for accomplishing the project. By doing so, employees will value their supervisor-led meetings because they connect to their work and help facilitate their success on the job.

In order to know where to focus meeting improvement initiatives, organizational leaders should measure their managers' level of strategically using meetings and develop training programs accordingly. By assessing managers' use of meetings, practitioners can help managers gauge the ways managers are using meetings and help them identify areas for improvement. Considering the pattern of results, managers may want to assess participation in decision making, freedom of speck, time courtesy, and overall meeting relevance (see Appendix A). However, previous research illustrates other important meeting characteristics in the development of workplace attitudes (e.g. Nixon & Littlepage, 1992). The key implication is that practitioners should not ignore the way managers use meetings as they appear to be important in the development of employee attitudes and behaviors.

Using the information gleaned from surveys and other resources, practitioners and organizational leaders can train managers concerning the effective use of meetings. Meetings are a costly workplace tool that when effectively executed may actually save money (Allen, Rogelberg, & Scott, 2008). It may be that managers do not know how to effectively use meetings or may slip into habits concerning meetings that are less effective (Rogelberg, Scott, & Kello, 2007). By holding trainings concerning the effective use of meetings in conjunction with assessing managers’ strategic use of meetings, practitioners may help managers capture important performance gains by promoting engagement and other important workplace attitudes/behaviors through meetings.

CHAPTER 7: LIMITATIONS AND FUTURE DIRECTIONS

Though this study is an important step within the engagement and meetings literature, several limitations exist as well as opportunities for future research. An obvious methodological limitation of this study is the use of correlational analysis and the resulting inability to draw causal conclusions despite the fact that a time-lag assessment of engagement was introduced. Though theory supports the current causal inferences, future research can address this limitation by using experimental designs. For example, one could vary the levels of some of the meetings variables (e.g. time courtesy) across meeting contexts and assess the degree to which individuals leave the meeting experiencing more or less of the psychological conditions for engagement. This would allow for a more clear indication of the degree to which certain strategic meeting behaviors are important to the development of employee engagement. These types of designs allow the direction of causality to be clearly identified. Further, employee engagement may change over time (Macey & Schneider, 2008). In this study, the time lag was as brief as the methodology would allow (i.e. about a week) primarily as a way of mitigating common method bias concerns. Future research may consider gathering ratings of employee engagement and meeting variables at multiple time points as a way of assessing the potential effects of meetings upon engagement longitudinally.

Another limitation of this study is the measures of the psychological conditions for engagement. In an effort to adequately capture the constructs proposed by Kahn

(1990), the measures used and validated by May et al. (2004) were compared to the original definitions of the psychological conditions for engagement. Some general inadequacies were noted and several items from Spreitzer's (1995) empowerment at work scale were added to the measure of psychological safety as well as one additional item developed for this study. Psychometric analysis showed adequate internal consistency reliability (i.e. alpha) for the measures. Additionally, the model was retested using only the items developed by May et al. (2004) and the pattern of results was the same. Further validation and development will add to the overall effectiveness of these measures and allow for more accurate assessment of these important antecedents to engagement.

Another limitation of this study is the overall response rate for the data was low (5% or 10%). This low response rate raises concerns about the external validity of the findings due to the high level of nonresponse (Rogelberg & Stanton, 2007). As previously discussed, several steps were taken to identify the potential for issues associated with nonresponse bias and no issues were found. It is difficult, however, to determine the exact number of individuals who actually received the notification. Email addresses are easily made and discarded, individuals can and do create multiple email addresses, and it is likely that many of the potential respondents did not check these addresses regularly. This appears to be the case as responses to the initial survey continued to arrive long after the second survey was sent to respondents. Due to the time-lag design, many of these late responders never received the second survey. Thus, the actual response rate and the external validity of the findings are hard to accurately assess.

Another sample related limitation stems from the overall complexity of the model. That is, due to the number of variables represented in the model, the ideal sample size would be a bit larger. Both the proposed and alternative models involve the estimation of many parameters. As number of parameters to be estimated increases, the sample size needed to accurately assess the model typically needs to be larger (Schumacker & Lomax, 2004). This became evident when using various fit indices to assess model fit. For example, CFI and TLI are not directly affected by sample size whereas chi-square, GFI, and AGFI are impacted by sample size (Bollen, 1990). Larger sample sizes tend to result in larger chi-square, GFI, and AGFI values, regardless of the overall fit of the model. Thus, smaller samples typically require researchers to report different fit indices that better reflect the degree to which their model fits the data (Schumacker & Lomax, 2004).

Another limitation related to the sample is the possibility of range restriction on the education level variable which may reduce generalizability. According to the U.S. Census Bureau (2000), only 24.4% of the population has completed a bachelor’s degree (or four year equivalent). Since 97% of the sample was college graduates, it does not accurately reflect the variance in education level within the workforce. This artifact of the data is a direct result of the sampling frame (i.e. UNCC Alumni Association), thus future research can benefit from targeting a more diverse sample. Doing so will allow for greater generalizability to other areas of the workforce.

Another limitation of this study is the deliberately narrow content coverage. This study focused on meetings as a location for promoting engagement in the workplace. As such, the variables measured focused almost exclusively on characteristics of the meeting and of the behaviors of managers associated with their meetings. However, previous research showed other job characteristics (e.g. organizational support, supervisor support, and procedural justice) are related to overall employee engagement (Saks, 2006; Rich et al., 2010). Future research should consider modeling both the strategic meetings variables and other job characteristics concurrently. This will allow for a more nuanced understanding of the contribution of effectively run meetings to overall employee engagement. Additionally, if these meetings variables are conceptually overlapping other job characteristics, future research assessing these variables concurrently will discover this.

Additionally, future research could control for or integrate other psychological intervening variables. For example, many of the managerial behaviors studied here are likely to affect employees' feelings about their manager. Researchers could look at how these meeting activities affect employees' relationship with their manager (e.g. leader-member exchange or perceived supervisor support) and the organization (e.g. perceived organizational support). Since previous research shows these to be important antecedents to engagement (e.g. Saks, 2006), it seems appropriate to explore their relationship with both the meetings variables as well as Kahn's psychological conditions for engagement.

Another limitation is that the meetings variables and the psychological conditions for engagement were assessed on the same survey, thus leaving the possibility of common-method bias. Although this is an appropriate concern, several methodological steps were taken to mitigate the potential for common-method bias (Podsakoff et al., 2003). First, respondent anonymity to each other and to their work supervisor was guaranteed by ethical guideline stipulations (i.e. IRB regulations). Also an online survey tool was used for matching rather than using an identifier within the survey. The online tool matched individuals based on their email address, thus no additional identifying information was needed across the two surveys. Second, the measures on the survey were counterbalanced in terms of question order. As previously stated in the methods, rearranging the order of the criterion and predictor measures on the survey allows researchers to control for item-context-induced mood states, priming effects, and other biases related to question context or item location on the survey. Thus, five versions of the survey were created to achieve full counterbalancing. Third, item development recommendations (Tourangeau et al., 2000) as well as the use of different scale endpoints (Podsakoff et al., 2003) were also applied to the survey to mitigate common-method bias. Taken together, these steps helped to allay common-method bias concerns. The absence of common-method bias is also partially confirmed by the confirmatory factor analyses used to assess the measurement model. If common-method bias was present, a one-factor model for the meetings variables would fit better than the other more differentiated models (Podsakoff et al., 2003). Additionally, the way the surveys were administered also partially mitigates the possibility for common-method bias. That is, the overall criterion variable was contained on a separate time-lag survey. This methodologically separates the major predictors from the ultimate criterion thus mitigating common-method bias concerns (Podsakoff et al., 2003).

In addition to these limitations, the current findings pose opportunities for future research concerning meetings and employee engagement. The findings concerning meeting time courtesy behaviors suggests that managers are uniquely situated to influence their employees' psychological states simply by how they run meetings from a time perspective. Future research is needed to understand how individual aspects of time courtesy affect the psychological conditions. That is, researchers can separate the time courtesy behaviors to “within” meeting issues and “external” meeting issues. Within meeting issues would include starting and ending on time. External meeting issues would focus on how they call the meetings in terms of time-of-day for the meeting and amount of time before the meeting begins (i.e. preparation time). By distinguishing between these types of meeting time courtesy issues, future researchers can discover which time courtesy behaviors matter more to the development of employee attitudes and behaviors.

As previously acknowledged, previous research shows that individuals have different time-orientations (Bluedorn, 2002) which may affect the way that managers’ time courtesy affects employees. Future research could look at the effects of employees’ time-orientation on the relationship between various meeting time courtesy behaviors and their development of the psychological conditions for engagement. Additionally, future research could see how managers’ time-orientation affects the degree to which they engage in particular meeting time courtesy behaviors. Perhaps more polychronic managers are more sensitive to employee time-demands and will engage in more meeting time courtesy behaviors. Managers who are more polychromic are better at multi-tasking and are also more aware of the multiple tasks that need to be completed (Sloecombe & Bluedorn, 1999). This awareness may allow them to be more sensitive to employees’ multiple tasks and attempt to be more courteous concerning their own infringement upon the employees’ time.

Also, the current study showed that meeting relevance positively relates to psychological meaningfulness. This finding, however, only illustrates the global feeling of overall meeting relevance for employees. That is, the measure only assesses how relevant their supervisor-led meetings are in general as opposed to the relevant nature of any single meeting. Future research could begin to look at specific meetings that supervisors' lead and how they impact employees' from an engagement perspective. One way to do this would be to perform a diary study. Employees would provide ratings of the relevance of each of their meetings with their supervisor over a given time period along with measures of their level of psychological meaningfulness and other meeting characteristics. This within-subjects multi-level (i.e. events nested within individuals) design would allow for both an understanding of how meeting characteristics and process affect individuals, but also how individual characteristics may affect the evaluation of the relevance of meetings.

Conclusion

Researchers, human-resource professionals, and practitioners' believe employee engagement to be important to overall organizational performance and viability for the future (Vance, 2006). This study provides evidence that an often ignored context, the meeting, can be used to develop the psychological conditions for engagement. The fact that managers' behaviors can impact employee engagement is not a novel idea (e.g. Saks, 2006). However, the reality that their behaviors in meetings are seemingly important may be an unexpected finding to both researchers and practitioners. These findings suggest that employees' experiences in meetings should no longer be taken for granted by human resource professionals, researchers, and practitioners. To the contrary, managers should leverage their meetings with their employees to accomplish greater engagement, satisfaction, and overall performance.

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APPENDIX A: FIRST EMPLOYEE SURVEY

Managers' Strategic Use of Meetings

Procedural Justice/Fairness

Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following: (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).

Invite employees to the meeting that represent all sides of the issues to be discussed
Allow time for employees to discuss all sides of the issues
Follow a series of defined steps for making group decisions
Rotate around assigned meeting roles (e.g. "devil's advocate" or "meeting facilitator").
Inform the employees of how the group will make decisions
Ensure multiple view-points are considered in each meeting
Generates standards so that decisions are made with consistency
Allows for requests for clarification on topics discussed in the meeting
Allows for requests for additional information on the topics discussed in the meeting
Ensures that meeting minutes accurately reflect the content of the meeting

Time Courtesy Meeting Practices

Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following: (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).

Schedule meetings in plenty of time for employees to fit them into their schedule
Start meetings at the scheduled time
End meetings when they are expected to end
Schedule meetings at convenient times for employees
Inform employees well in advance about the meetings

Agenda Usage

Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following: (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).

Provide an agenda for the meeting
Share the agenda with everyone at the meeting
Make the agenda available BEFORE the meeting
Ensure employees have the opportunity to give feedback on the agenda BEFORE the meeting
Incorporate employees' suggestions concerning the agenda
Ensure that employees have a say in what is contained on the agenda

Participation in Decision Making

Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following: (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).

Ensure employees participate in decision making about their jobs
Ensure employees participate in shaping departmental policies
Ask an employee to play “devil’s advocate” in the decision-making process
Ask for employees’ views concerning company decisions
Give employees the opportunity to challenge decisions made in the meeting
Give employees the opportunity to express concerns about the decisions made
Ensure employees have a high degree of influence in group decisions
Ensure employees can participate in setting new team policies
Ensure employees’ views have a real influence on group decisions

Freedom of Speech/Voice

Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, how frequently does he/she do the following: (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).
Ensure employees’ feel they have freedom of speech
Give employees time to express concerns about company policies
Establish turn-taking procedures during the meeting
Provide time for employees to express disagreements with management practices
Give each employee an opportunity to express ideas about issues discussed in the meeting
Ensure that each employee has an opportunity to speak freely about work issues
Tries to reduce employees’ fears about expressing their feelings on work issues

Meeting Relevance

Think of the meetings with your supervisor that he/she leads. Regarding ONLY these meetings, please indicate your level of agreement with the following statements: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree).
Meetings led by my supervisor are relevant to my job
Meetings led by my supervisor clarify my duties and responsibilities
Meetings led by my supervisor clarify the goals and objectives for my job
Meetings led by my supervisor help me determine the appropriate procedures for my work tasks
Meetings led by my supervisor help ensure the procedures I use to do my job are correct and proper
Meetings led by my supervisor help me accomplish my duties and responsibilities
Meetings led by my supervisor help me complete the goals and objectives of my job

Meeting Load: Count

How many meetings do you attend that are led by your supervisor/manager in a typical week?
How many hours do you spend in meetings with your supervisor/manager in a typical week?
On average, how many work meetings do you attend each week?
On average, how many hours do you spend in meetings each week?
What percent of all your work meetings are led by your supervisor/manager?

What percent of all your work time is spent in meetings led by your supervisor/manager?

Meeting Size
On average, how many people attend your work related meetings?
On average, how many people attend the meetings led by your supervisor?
In thinking about your meetings with your supervisor, indicate the percentage that have
3 to 4 total attendees (including you) ____________
5 to 6 total attendees (including you) ____________
7 to 8 total attendees (including you) ____________
9 to 10 total attendees (including you) ____________
More than 10 total attendees (including you) ___________

Employee Engagement
Think about the work that you do. Please indicate how frequently the following are true of you at work: (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).
At my work, I feel bursting with energy (VI1)
I find the work that I do full of meaning and purpose (DE1)
Time flies when I am working (AB1)
At my job, I feel strong and vigorous (VI2)
I am enthusiastic about my job (DE2)
When I am working, I forget everything else around me (AB2)
My job inspires me (DE3)
When I get up in the morning, I feel like going to work (VI3)
I feel happy when I am working intensely (AB3)
I am proud of the work that I do (DE4)
I am immersed in my work (AB4)
I can continue working for very long periods at a time (VI4)
To me, my job is challenging (DE5)
I get carried away when I am working (AB5)
At my job, I am very resilient, mentally (VI5)
It is difficult to detach myself from my job (AB6)
At my work, I always persevere, even when things do not go well (VI6)
VI = Vigor, DE = Dedication, and AB = Absorption

Psychological Conditions for Engagement

Psychological Meaningfulness (May et al., 2004 and Spreitzer, 1995)
Think about the work that you do. Indicate the extent to which you agree or disagree with the following statements: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree).
The work I do on this job is very important to me.
My job activities are personally meaningful to me.
The work I do on this job is worthwhile.
My job activities are significant to me.
The work I do on this job is meaningful to me.
I feel that the work I do on my job is valuable.

Psychological safety
Think about the work that you do. Indicate the extent to which you agree or disagree with the following statements: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree).
I'm not afraid to be myself at work.
I'm not afraid to express my opinions at work.
My work environment is non-threatening.
When I make a mistake, it is never held against me.
It is easy to ask others for help in my work group.
In my work group, I feel free to take risks.
My work environment is predictable.
I'm not afraid to be open with my work colleagues.

Psychological availability
Think about the work that you do. Indicate the extent to which you agree or disagree with the following statements: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree).
I am confident in my ability to handle competing demands at work.
I am confident in my ability to deal with problems that come up at work.
I am confident in my ability to think clearly at work.
I am confident in my ability to display the appropriate emotions at work.
I am confident that I can handle the physical demands at work.

Other Scales and Control Variables

Gender
What is your gender?

Age
What is your age (in years)?

Tenure
How long have you worked for your current employer?

How long have you worked with your current supervisor?

Job Level
Assume there are 5 levels within your organization, with 1 being the lowest and 5 being the highest. At the site where you work, what level is your job?

How would you best characterize your job level?
Employee associated level
Supervisor level
Manager level
Director level

Senior/Top Management level

Work Role Interdependence
Please indicate the extent to which you agree or disagree with the following statements: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree).
I work closely with others in doing my work
I frequently must coordinate my efforts with others
My own performance is dependent on receiving accurate information from others
The way I perform my job has a significant impact on others
My work requires me to consult with others fairly frequently

Work Role Independence
Please indicate the extent to which you agree or disagree with the following statements: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree).
I work fairly independently of others in my work
I can plan my own work with little need to coordinate with others
I rarely have to obtain information from others to complete my work

AJDI: Work
Think of the work you do at present. How well does each of the following words or phrases describe your work? (Yes, No, or ?)
Gives a sense of accomplishment
Dull
Satisfying
Uniteresting
Challenging

AJDI: Coworkers
Think of the majority of people that you work with now or the people you meet in connection with your work. How well does each of the following words or phrases describe these people? (Yes, No, or ?)
Helpful
Boring
Intelligent
Lazy
Responsible

AJDI: Supervisor
Think of your supervisor and the kind of supervision that you get on your job. How well does each of the following words or phrases describe your supervisor? (Yes, No, or ?)
Praises good work
Annoying
Tactful
Bad

Up-to-date

Team Demographics
Do you work as part of a team? (Yes or No)

How many people work on your team? (1 to 20+)

Proximity to Supervisor
Where do you work in relation to your supervisor?
in the same office
on the same floor
in the same building
in different buildings
in different cities
in different states/provinces
in different countries

If you work in the same building as your supervisor, how long does it take you to get to their office (in minutes)?

Frequency of Supervisor Interaction
How many hours per week do you spend interacting with your supervisor?
How many hours each week do you spend emailing your supervisor?
How many hours per week do you spend on the telephone with your supervisor?
How many hours per week do you spend interacting one-on-one with your supervisor?
How many hours per week do you spend text messaging with your supervisor?

Organization Type
What type of organization do you work for?
1 Publicly traded, for profit, quoted on the stock exchange
2 Privately held, for profit, not quoted on the stock exchange
3 Private, not for profit
4 Public sector (national, state, or city government, etc.)
5 Other (please specify) _______________

Department Type
What department do you work in?
HR
Marketing
Sales
Accounting
Administration
Public Relations
Research and Development
Production
Other (please specify)

How many hours do you work at your current job?

What is your job title?

Are you self-employed? Y N

How many individuals does your supervisor manage? (1-20+) _____

Do you supervise others? Y N

Which of the following best reflect the highest level of education you have received? (check one)
Some high school
Graduated high school
Some college
Graduated college
Some graduate work
Graduate degree

APPENDIX B: SECOND EMPLOYEE SURVEY

Employee Engagement

Think about the work that you do. Please indicate how frequently the following are true of you at work: (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always).

At my work, I feel bursting with energy (VI1)
I find the work that I do full of meaning and purpose (DE1)
Time flies when I am working (AB1)
At my job, I feel strong and vigorous (VI2)
I am enthusiastic about my job (DE2)
When I am working, I forget everything else around me (AB2)
My job inspires me (DE3)
When I get up in the morning, I feel like going to work (VI3)
I feel happy when I am working intensely (AB3)
I am proud of the work that I do (DE4)
I am immersed in my work (AB4)
I can continue working for very long periods at a time (VI4)
To me, my job is challenging (DE5)
I get carried away when I am working (AB5)
At my job, I am very resilient, mentally (VI5)
It is difficult to detach myself from my job (AB6)
At my work, I always persevere, even when things do not go well (VI6)
VI = Vigor, DE = Dedication, and AB = Absorption

LMX

Please indicate your level of agreement with the following statements: (1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree Nor Disagree, 4 = Agree, 5 = Strongly Agree).

I usually feel that I know where I stand with my immediate supervisor
I feel that my immediate supervisor understands my problems and needs
I feel that my immediate supervisor recognizes my potential
Regardless of how much formal authority my immediate supervisor has built into his or her position, I think the chances are high that he or she would be personally inclined to use power to help me solve problems in my work
Again, regardless of the amount of formal authority my immediate supervisor has, I can count on him or her to "bail me out" at his or her expense when I really need it
I have enough confidence in my immediate supervisor that I would defend and justify his or her decisions if he or she were not present to do so
I would characterize my working relationship with my immediate supervisor as highly effective

APPENDIX C: EMAIL NOTIFICATIONS AND COVER LETTER

Pre-notification Email

Dear Colleague,

A team of researchers at the University of North Carolina at Charlotte are beginning a research study focused on leadership and employee engagement. The goal of this study is to help understand how managers help engage employees at work.

In order to accomplish this, we need your help. The study involves two separate surveys to be completed by employees in organizations who meet with their supervisor on a routine basis. In a few days you will receive the link to the first survey for you to complete. This survey will take approximately 15 minutes and will ask questions about your experiences at work. About a week later you will receive an email invitation for the second, very brief (less than five minutes) survey.

If desired, you will receive a summary of the findings approximately two months after the completion of the second survey. This summary will provide some insights into how managers affect employees' level of engagement in organizations and provide some general guidelines for improving employee engagement in general.

As with any study, your participation is completely voluntary, anonymous, confidential, and greatly appreciated! If you have any questions, please feel free to contact us at jalle114@uncc.edu.

Thank you for your time and consideration.

Best,

Joseph A. Allen, M.A.
Organizational Science Ph.D. Student
UNC-Charlotte

Steven Rogelberg, Ph.D.
Professor, Organizational Science
UNC-Charlotte

First Survey Email Invitation

Dear Colleague,

Thank you for willingness to participate in the research on leadership and employee engagement. We really appreciate your time and participation. Without your opinions and thoughts on this topic, this research would not be possible.

We kindly invite you to participate in this initial survey concerning your experiences in your organization. Below is a link that will take you to the survey site and provide additional information on participation in this study. If you have difficulty following the link, please try pasting it in a separate browser window or contact us directly with any questions.

(*insert link here*)

Best regards,

Joseph A. Allen, M.A.
Organizational Science Ph.D. Student
UNC-Charlotte

Steven Rogelberg, Ph.D.
Professor, Organizational Science
UNC-Charlotte

Second Survey Email Invitation

Dear Colleague,

Thank you for your recent participation in the research on leadership and employee engagement. We really appreciate your time and participation. Without your opinions and thoughts on this topic, this research would not be possible.

Below is a link to the second and final survey for this study. This survey is much shorter (less than five minutes) than the initial survey. If you indicated that you would like a brief report of the findings, you will receive the report approximately 2 months after completing this final survey. If you have difficulty following the link, please try pasting it in a separate browser window or contact us directly with any questions.

(*insert link here*)

Best regards,

Joseph A. Allen, M.A.
Organizational Science Ph.D. Student
UNC-Charlotte

Steven Rogelberg, Ph.D.
Professor, Organizational Science
UNC-Charlotte

Cover Letter on Surveys

Thank you for your willingness to participate in the Leader and Employee Engagement Study. Your thoughts and opinions will greatly help us in our efforts to understand leadership and engagement in organizations. We have several important points for you to remember as you participate in this study:

• The survey will take approximately 10 to 15 minutes to complete.*
• You are a volunteer. The decision to participate in this study is completely up to you. If you decide to be in the study, you may stop at any time. There are no foreseeable risks to participation.
• Your participation is completely anonymous. After you complete the survey, the information you provide will be combined with the responses from all other participants (approximately 1000 people). Surveys will be stored in a secure location at the university.
• You must be 18 or over to participate in this study.
• There are no known risks associated with participation. Although there are no direct benefits to you as an individual, understanding how managers lead and engage employees will certainly benefit organizational science.
• UNC Charlotte wants to make sure that you are treated in a fair and respectful manner. Contact the university's Research Compliance Office (704-687-3309) if you have questions about how you are treated as a study participant. If you have any other questions about the project, please contact Joseph Allen at jalle114@uncc.edu.

Again, thank you for giving us some of your valuable time. Research would not be possible without the assistance of people like you.

Sincerely,

Joseph A. Allen, M.A.
Organizational Science Ph.D. Student
UNC-Charlotte

Steven Rogelberg, Ph.D.
Professor, Organizational Science
UNC-Charlotte

* Note that this line will be modified for the second survey to reflect the briefer length (i.e. 5 minutes).